



SEQUENCE LISTING

<110> Makowski, Lee  
Hyman, Paul  
Williams, Mark

<120> STAGED ASSEMBLY OF NANOSTRUCTURES

<130> 8471-010-999

<140> 10/080,608  
<141> 2002-02-21

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<170> FastSEQ for Windows Version 4.0

<210> 1  
<211> 28  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 1  
Met Lys Gln Leu Glu Asp Lys Val Glu Glu Leu Leu Ser Lys Asn Tyr  
1 5 10 15  
His Leu Glu Asn Glu Val Ala Arg Leu Lys Lys Leu  
20 25

<210> 2  
<211> 28  
<212> PRT  
<213> Unknown  
<220>  
<223> Probable variant of homo sapiens protein.

<400> 2  
Thr Asp Thr Leu Gln Ala Glu Thr Asp Gln Leu Glu Asp Glu Lys Tyr  
1 5 10 15  
Ala Leu Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu  
20 25

<210> 3  
<211> 28  
<212> PRT  
<213> Unknown  
<220>  
<223> Probable variant of homo sapiens protein.

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1 5 10 15  
Glu Leu Ala Ser Thr Ala Asn Met Leu Arg Glu Gln  
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<210> 4  
<211> 35  
<212> PRT

<213> Mus musculus

<400> 4  
Val Leu Glu Thr Gln His Lys Asn Glu Arg Leu Thr Ala Glu Val Glu  
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Gln Leu Gln Lys Lys Leu Ser Thr Leu Ser Arg Glu Phe Lys Gln Leu  
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Arg Asn Leu  
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<210> 5

<211> 35  
<212> PRT  
<213> Homo sapiens

<400> 5  
Cys Lys Glu Leu Thr Gly Glu Asn Glu Ala Leu Glu Lys Lys Ala Asp  
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Ser Leu Lys Glu Arg Ile Gln Tyr Leu Ala Lys Glu Ile Glu Glu Val  
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Lys Asp Leu  
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<210> 6

<211> 33  
<212> PRT  
<213> Homo sapiens

<220>  
<221> VARIANT  
<222> 33  
<223> Xaa = Any Amino Acid

<400> 6  
Cys Gly Gly Val Gln Ala Glu Glu Gln Lys Leu Ile Ser Glu Glu Asp  
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Leu Leu Arg Lys Arg Arg Glu Gln Leu Lys His Lys Leu Glu Gln Leu  
20 25 30  
Xaa

<210> 7  
<211> 33  
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<220>  
<221> VARIANT  
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<400> 7  
Cys Gly Gly Met Arg Arg Lys Asn Asp Thr His Gln Gln Asp Ile Asp  
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Asp Leu Lys Arg Gln Asn Ala Leu Leu Glu Gln Gln Val Arg Ala Leu  
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Xaa

<210> 8

<211> 32  
 <212> PRT  
 <213> Unknown  
 <220>  
 <223> Probable variant of *Mus musculus* protein

<400> 8  
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 Thr Leu Ile Glu Glu Leu Lys Ala Leu Lys Asp Leu Tyr Ser His Lys  
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<210> 9  
 <211> 33  
 <212> PRT  
 <213> *Schizosaccharomyces pombe*

<400> 9  
 Val Val Thr Leu Lys Glu Leu His Ser Ser Thr Thr Leu Glu Asn Asp  
 1 5 10 15  
 Gln Leu Arg Gln Lys Val Arg Gln Leu Glu Glu Leu Arg Ile Leu  
 20 25 30

Lys

<210> 10  
 <211> 885  
 <212> PRT  
 <213> *Mus musculus*

<400> 10  
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 1 5 10 15  
 Thr Ser Thr Pro His Ser Lys Asp His Ser Ser Pro Phe Tyr Ser Pro  
 20 25 30  
 Ser His Asn Gly Leu Leu Ala Asp His His Glu Ser Leu Asp Asn Asp  
 35 40 45  
 Val Ala Arg Glu Ile Gln Tyr Leu Asp Glu Val Leu Glu Ala Asn Cys  
 50 55 60  
 Cys Asp Ser Ser Val Asp Gly Thr Tyr Asn Gly Ile Ser Ser Pro Glu  
 65 70 75 80  
 Pro Gly Ala Ala Ile Leu Val Ser Ser Leu Gly Ser Pro Ala His Ser  
 85 90 95  
 Val Thr Glu Ala Glu Pro Thr Glu Lys Ala Ser Gly Arg Gln Val Pro  
 100 105 110  
 Pro His Ile Glu Leu Ser Arg Ile Pro Ser Asp Arg Met Ala Glu Gly  
 115 120 125  
 Glu Arg Ala Asn Gly His Ser Thr Asp Gln Pro Gln Asp Leu Leu Gly  
 130 135 140  
 Asn Ser Leu Gln Ala Pro Ala Ser Pro Ser Ser Thr Ser Ser His  
 145 150 155 160  
 Cys Ser Ser Arg Asp Gly Glu Phe Thr Leu Thr Thr Leu Lys Lys Glu  
 165 170 175  
 Ala Lys Phe Glu Leu Arg Ala Phe His Glu Asp Lys Lys Pro Ser Lys  
 180 185 190  
 Leu Phe Glu Glu Asp Glu Arg Glu Lys Glu Gln Phe Cys Val Arg Lys  
 195 200 205  
 Val Arg Pro Ser Glu Glu Met Ile Glu Leu Glu Lys Glu Arg Arg Glu  
 210 215 220  
 Leu Ile Arg Ser Gln Ala Val Lys Lys Asn Pro Gly Ile Ala Ala Lys  
 225 230 235 240

Trp Trp Asn Pro Pro Gln Glu Lys Thr Ile Glu Glu Gln Leu Asp Glu  
 245 250 255  
 Glu His Leu Glu Ser His Arg Arg Tyr Lys Glu Arg Lys Glu Lys Arg  
 260 265 270  
 Ala Gln Gln Glu Gln Leu Gln Leu Gln Gln Gln Gln Gln Gln Gln Leu  
 275 280 285  
 Gln Gln Gln Leu Gln Gln Gln Leu Gln Gln Gln Gln Leu Gln  
 290 295 300  
 Gln Gln Leu Gln Gln Leu Ser Thr Ser Gln Pro Cys Thr Ala  
 305 310 315 320  
 Pro Ala Ala His Lys His Leu Asp Gly Ile Glu His Thr Lys Glu Asp  
 325 330 335  
 Val Val Thr Glu Gln Ile Asp Phe Ser Ala Ala Arg Lys Gln Phe Gln  
 340 345 350  
 Leu Met Glu Asn Ser Arg Gln Thr Leu Ala Lys Gly Gln Ser Thr Pro  
 355 360 365  
 Arg Leu Phe Ser Ile Lys Pro Tyr Tyr Lys Pro Leu Gly Ser Ile His  
 370 375 380  
 Ser Asp Lys Pro Pro Thr Ile Leu Arg Pro Ala Thr Val Gly Gly Thr  
 385 390 395 400  
 Leu Glu Asp Gly Gly Thr Gln Ala Ala Lys Glu Gln Lys Ala Pro Cys  
 405 410 415  
 Val Ser Glu Ser Gln Ser Ala Gly Ala Gly Pro Ala Asn Ala Ala Thr  
 420 425 430  
 Gln Gly Lys Glu Gly Pro Tyr Ser Glu Pro Ser Lys Arg Gly Pro Leu  
 435 440 445  
 Ser Lys Leu Trp Ala Glu Asp Gly Glu Phe Thr Ser Ala Arg Ala Val  
 450 455 460  
 Leu Thr Val Val Lys Asp Glu Asp His Gly Ile Leu Asp Gln Phe Ser  
 465 470 475 480  
 Arg Ser Val Asn Val Ser Leu Thr Gln Glu Glu Leu Asp Ser Gly Leu  
 485 490 495  
 Asp Glu Leu Ser Val Arg Ser Gln Asp Thr Thr Val Leu Glu Thr Leu  
 500 505 510  
 Ser Asn Asp Phe Ser Met Asp Asn Ile Ser Asp Ser Gly Ala Ser Asn  
 515 520 525  
 Glu Thr Thr Ser Ala Leu Gln Glu Asn Ser Leu Ala Asp Phe Ser Leu  
 530 535 540  
 Pro Gln Thr Pro Gln Thr Asp Asn Pro Ser Glu Gly Arg Glu Gly Val  
 545 550 555 560  
 Ser Lys Ser Phe Ser Asp His Gly Phe Tyr Ser Pro Ser Ser Thr Leu  
 565 570 575  
 Gly Asp Ser Pro Ser Val Asp Asp Pro Leu Glu Tyr Gln Ala Gly Leu  
 580 585 590  
 Leu Val Gln Asn Ala Ile Gln Gln Ala Ile Ala Glu Gln Val Asp Lys  
 595 600 605  
 Ala Glu Ala His Thr Ser Lys Glu Gly Ser Glu Gln Gln Glu Pro Glu  
 610 615 620  
 Ala Thr Val Glu Glu Ala Gly Ser Gln Thr Pro Gly Ser Glu Lys Pro  
 625 630 635 640  
 Gln Gly Met Phe Ala Pro Pro Gln Val Ser Ser Pro Val Gln Glu Lys  
 645 650 655  
 Arg Asp Ile Leu Pro Lys Asn Leu Pro Ala Glu Asp Arg Ala Leu Arg  
 660 665 670  
 Glu Lys Gly Pro Ser Gln Pro Pro Thr Ala Ala Gln Pro Ser Gly Pro  
 675 680 685  
 Val Asn Met Glu Glu Thr Arg Pro Glu Gly Gly Tyr Phe Ser Lys Tyr  
 690 695 700  
 Ser Glu Ala Ala Glu Leu Arg Ser Thr Ala Ser Leu Leu Ala Thr Gln  
 705 710 715 720  
 Glu Ser Asp Val Met Val Gly Pro Phe Lys Leu Arg Ser Arg Lys Gln  
 725 730 735  
 Arg Thr Leu Ser Met Ile Glu Glu Glu Ile Arg Ala Ala Gln Glu Arg

740	745	750	
Glu Glu Glu Leu Lys Arg Gln Arg Gln Val Arg Gln Ser Thr Pro Ser			
755	760	765	
Pro Arg Ala Lys Asn Ala Pro Ser Leu Pro Ser Arg Thr Thr Cys Tyr			
770	775	780	
Lys Thr Ala Pro Gly Lys Ile Glu Lys Val Lys Pro Pro Pro Ser Pro			
785	790	795	800
Thr Thr Glu Gly Pro Ser Leu Gln Pro Asp Leu Ala Pro Glu Glu Ala			
805	810		815
Ala Gly Thr Gln Arg Pro Lys Asn Leu Met Gln Thr Leu Met Glu Asp			
820	825		830
Tyr Glu Thr His Lys Ser Lys Arg Arg Glu Arg Met Asp Asp Ser Ser			
835	840		845
Tyr Thr Ser Lys Leu Leu Ser Cys Lys Val Thr Ser Glu Val Leu Glu			
850	855		860
Ala Thr Arg Val Asn Arg Arg Lys Ser Ala Ser Gly Leu Ala Leu Gly			
865	870		880
Gly Arg Asp Leu Arg			
885			

<210> 11  
 <211> 3878  
 <212> PRT  
 <213> Homo sapiens

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Ile Glu Glu Leu Ser Leu Ala Phe Leu Val Arg Gln Leu Ala Gln Phe				
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Arg Gln Arg Lys Ala Gln Ser Asp Gly Gln Ser Pro Ser Lys Lys Gln				
35	40		45	
Lys Lys Lys Arg Lys Thr Ser Ser Ser Lys His Asp Val Ser Ala His				
50	55		60	
His Asp Leu Asn Ile Asp Gln Ser Gln Cys Asn Glu Met Tyr Ile Asn				
65	70		75	80
Ser Ser Gln Arg Val Glu Ser Thr Val Ile Pro Glu Ser Thr Ile Met				
85	90		95	
Arg Thr Leu His Ser Gly Glu Ile Thr Ser His Glu Gln Gly Phe Ser				
100	105		110	
Val Glu Leu Glu Ser Glu Ile Ser Thr Thr Ala Asp Asp Cys Ser Ser				
115	120		125	
Glu Val Asn Gly Cys Ser Phe Val Met Arg Thr Gly Lys Pro Thr Asn				
130	135		140	
Leu Leu Arg Glu Glu Glu Phe Gly Val Asp Asp Ser Tyr Ser Glu Gln				
145	150		155	160
Gly Ala Gln Asp Ser Pro Thr His Leu Glu Met Met Glu Ser Glu Leu				
165	170		175	
Ala Gly Lys Gln His Glu Ile Glu Glu Leu Asn Arg Glu Leu Glu Glu				
180	185		190	
Met Arg Val Thr Tyr Gly Thr Glu Gly Leu Gln Gln Leu Gln Glu Phe				
195	200		205	
Glu Ala Ala Ile Lys Gln Arg Asp Gly Ile Ile Thr Gln Leu Thr Ala				
210	215		220	
Asn Leu Gln Gln Ala Arg Arg Glu Lys Asp Glu Thr Met Arg Glu Phe				
225	230		235	240
Leu Glu Leu Thr Glu Gln Ser Gln Lys Leu Gln Ile Gln Phe Gln Gln				
245	250		255	
Leu Gln Ala Ser Glu Thr Leu Arg Asn Ser Thr His Ser Ser Thr Ala				
260	265		270	
Ala Asp Leu Leu Gln Ala Lys Gln Gln Ile Leu Thr His Gln Gln Gln				
275	280		285	

Leu Glu Glu Gln Asp His Leu Leu Glu Asp Tyr Gln Lys Lys Lys Glu  
 290 295 300  
 Asp Phe Thr Met Gln Ile Ser Phe Leu Gln Glu Lys Ile Lys Val Tyr  
 305 310 315 320  
 Glu Met Glu Gln Asp Lys Lys Val Glu Asn Ser Asn Lys Glu Glu Ile  
 325 330 335  
 Gln Glu Lys Glu Thr Ile Ile Glu Glu Leu Asn Thr Lys Ile Ile Glu  
 340 345 350  
 Glu Glu Lys Lys Thr Leu Glu Leu Lys Asp Lys Leu Thr Thr Ala Asp  
 355 360 365  
 Lys Leu Leu Gly Glu Leu Gln Glu Gln Ile Val Gln Lys Asn Gln Glu  
 370 375 380  
 Ile Lys Asn Met Lys Leu Glu Leu Thr Asn Ser Lys Gln Lys Glu Arg  
 385 390 395 400  
 Gln Ser Ser Glu Glu Ile Lys Gln Leu Met Gly Thr Val Glu Glu Leu  
 405 410 415  
 Gln Lys Arg Asn His Lys Asp Ser Gln Phe Glu Thr Asp Ile Val Gln  
 420 425 430  
 Arg Met Glu Gln Glu Thr Gln Arg Lys Leu Glu Gln Leu Arg Ala Glu  
 435 440 445  
 Leu Asp Glu Met Tyr Gly Gln Gln Ile Val Gln Met Lys Gln Glu Leu  
 450 455 460  
 Ile Arg Gln His Met Ala Gln Met Glu Glu Met Lys Thr Arg His Lys  
 465 470 475 480  
 Gly Glu Met Glu Asn Ala Leu Arg Ser Tyr Ser Asn Ile Thr Val Asn  
 485 490 495  
 Glu Asp Gln Ile Lys Leu Met Asn Val Ala Ile Asn Glu Leu Asn Ile  
 500 505 510  
 Lys Leu Gln Asp Thr Asn Ser Gln Lys Glu Lys Leu Lys Glu Glu Leu  
 515 520 525  
 Gly Leu Ile Leu Glu Glu Lys Cys Ala Leu Gln Arg Gln Leu Glu Asp  
 530 535 540  
 Leu Val Glu Glu Leu Ser Phe Ser Arg Glu Gln Ile Gln Arg Ala Arg  
 545 550 555 560  
 Gln Thr Ile Ala Glu Gln Glu Ser Lys Leu Asn Glu Ala His Lys Ser  
 565 570 575  
 Leu Ser Thr Val Glu Asp Leu Lys Ala Glu Ile Val Ser Ala Ser Glu  
 580 585 590  
 Ser Arg Lys Glu Leu Glu Leu Lys His Glu Ala Glu Val Thr Asn Tyr  
 595 600 605  
 Lys Ile Lys Leu Glu Met Leu Glu Lys Glu Lys Asn Ala Val Leu Asp  
 610 615 620  
 Arg Met Ala Glu Ser Gln Glu Ala Glu Leu Glu Arg Leu Arg Thr Gln  
 625 630 635 640  
 Leu Leu Phe Ser His Glu Glu Glu Leu Ser Lys Leu Lys Glu Asp Leu  
 645 650 655  
 Glu Ile Glu His Arg Ile Asn Ile Glu Lys Leu Lys Asp Asn Leu Gly  
 660 665 670  
 Ile His Tyr Lys Gln Gln Ile Asp Gly Leu Gln Asn Glu Met Ser Gln  
 675 680 685  
 Lys Ile Glu Thr Met Gln Phe Glu Lys Asp Asn Leu Ile Thr Lys Gln  
 690 695 700  
 Asn Gln Leu Ile Leu Glu Ile Ser Lys Leu Lys Asp Leu Gln Gln Ser  
 705 710 715 720  
 Leu Val Asn Ser Lys Ser Glu Glu Met Thr Leu Gln Ile Asn Glu Leu  
 725 730 735  
 Gln Lys Glu Ile Glu Ile Leu Arg Gln Glu Glu Lys Glu Lys Gly Thr  
 740 745 750  
 Leu Glu Gln Glu Val Gln Glu Leu Gln Leu Lys Thr Glu Leu Leu Glu  
 755 760 765  
 Lys Gln Met Lys Glu Lys Glu Asn Asp Leu Gln Glu Lys Phe Ala Gln  
 770 775 780  
 Leu Glu Ala Glu Asn Ser Ile Leu Lys Asp Glu Lys Lys Thr Leu Glu

785	790	795	800												
Asp	Met	Leu	Lys	Ile	His	Thr	Pro	Val	Ser	Gln	Glu	Glu	Arg	Leu	Ile
				805				810						815	
Phe	Leu	Asp	Ser	Ile	Lys	Ser	Lys	Ser	Lys	Asp	Ser	Val	Trp	Glu	Lys
				820				825					830		
Glu	Ile	Glu	Ile	Leu	Ile	Glu	Glu	Asn	Glu	Asp	Leu	Lys	Gln	Gln	Cys
				835				840				845			
Ile	Gln	Leu	Asn	Glu	Glu	Ile	Glu	Lys	Gln	Arg	Asn	Thr	Phe	Ser	Phe
				850				855			860				
Ala	Glu	Lys	Asn	Phe	Glu	Val	Asn	Tyr	Gln	Glu	Leu	Gln	Glu	Glu	Tyr
				865				870			875			880	
Ala	Cys	Leu	Leu	Lys	Val	Lys	Asp	Asp	Leu	Glu	Asp	Ser	Lys	Asn	Lys
				885				890			895				
Gln	Glu	Leu	Glu	Tyr	Lys	Ser	Lys	Leu	Lys	Ala	Leu	Asn	Glu	Glu	Leu
				900				905				910			
His	Leu	Gln	Arg	Ile	Asn	Pro	Thr	Thr	Val	Lys	Met	Lys	Ser	Ser	Val
				915				920			925				
Phe	Asp	Glu	Asp	Lys	Thr	Phe	Val	Ala	Glu	Thr	Leu	Glu	Met	Gly	Glu
				930				935			940				
Val	Val	Glu	Lys	Asp	Thr	Thr	Glu	Leu	Met	Glu	Lys	Leu	Glu	Val	Thr
				945				950			955			960	
Lys	Arg	Glu	Lys	Leu	Glu	Leu	Ser	Gln	Arg	Leu	Ser	Asp	Leu	Ser	Glu
				965				970			975				
Gln	Leu	Lys	Gln	Lys	His	Gly	Glu	Ile	Ser	Phe	Leu	Asn	Glu	Glu	Val
				980				985			990				
Lys	Ser	Leu	Lys	Gln	Glu	Lys	Glu	Gln	Val	Ser	Leu	Arg	Cys	Arg	Glu
				995				1000			1005				
Leu	Glu	Ile	Ile	Asn	His	Asn	Arg	Ala	Glu	Asn	Val	Gln	Ser	Cys	
				1010				1015			1020				
Asp	Thr	Gln	Val	Ser	Ser	Leu	Leu	Asp	Gly	Val	Val	Thr	Met	Thr	Ser
				1025				1030			1035			1040	
Arg	Gly	Ala	Glu	Gly	Ser	Val	Ser	Lys	Val	Asn	Lys	Ser	Phe	Gly	Glu
				1045				1050			1055				
Glu	Ser	Lys	Ile	Met	Val	Glu	Asp	Lys	Val	Ser	Phe	Glu	Asn	Met	Thr
				1060				1065			1070				
Val	Gly	Glu	Glu	Ser	Lys	Gln	Glu	Gln	Leu	Ile	Leu	Asp	His	Leu	Pro
				1075				1080			1085				
Ser	Val	Thr	Lys	Glu	Ser	Ser	Leu	Arg	Ala	Thr	Gln	Pro	Ser	Glu	Asn
				1090				1095			1100				
Asp	Lys	Leu	Gln	Lys	Glu	Leu	Asn	Val	Leu	Lys	Ser	Glu	Gln	Asn	Asp
				1105				1110			1115			1120	
Leu	Arg	Leu	Gln	Met	Glu	Ala	Gln	Arg	Ile	Cys	Leu	Ser	Leu	Val	Tyr
				1125				1130			1135				
Ser	Thr	His	Val	Asp	Gln	Val	Arg	Glu	Tyr	Met	Glu	Asn	Glu	Lys	Asp
				1140				1145			1150				
Lys	Ala	Leu	Cys	Ser	Leu	Lys	Glu	Glu	Leu	Ile	Phe	Ala	Gln	Glu	Glu
				1155				1160			1165				
Lys	Ile	Lys	Glu	Leu	Gln	Lys	Ile	His	Gln	Leu	Glu	Leu	Gln	Thr	Met
				1170				1175			1180				
Lys	Thr	Gln	Glu	Thr	Gly	Asp	Glu	Gly	Lys	Pro	Leu	His	Leu	Leu	Ile
				1185				1190			1195			1200	
Gly	Lys	Leu	Gln	Lys	Ala	Val	Ser	Glu	Glu	Cys	Ser	Tyr	Phe	Leu	Gln
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Thr	Leu	Cys	Ser	Val	Leu	Gly	Glu	Tyr	Tyr	Thr	Pro	Ala	Leu	Lys	Cys
				1220				1225			1230				
Glu	Val	Asn	Ala	Glu	Asp	Lys	Glu	Asn	Ser	Gly	Asp	Tyr	Ile	Ser	Glu
				1235				1240			1245				
Asn	Glu	Asp	Pro	Glu	Leu	Gln	Asp	Tyr	Arg	Tyr	Glu	Val	Gln	Asp	Phe
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Gln	Glu	Asn	Met	His	Thr	Leu	Leu	Asn	Lys	Val	Thr	Glu	Glu	Tyr	Asn
				1265				1270			1275			1280	
Lys	Leu	Leu	Val	Leu	Gln	Thr	Arg	Leu	Ser	Lys	Ile	Trp	Gly	Gln	Gln
				1285				1290			1295				

Thr Asp Gly Met Lys Leu Glu Phe Gly Glu Glu Asn Leu Pro Lys Glu  
 1300 1305 1310  
 Glu Thr Glu Phe Leu Ser Ile His Ser Gln Met Thr Asn Leu Glu Asp  
 1315 1320 1325  
 Ile Asp Val Asn His Lys Ser Lys Leu Ser Ser Leu Gln Asp Leu Glu  
 1330 1335 1340  
 Lys Thr Lys Leu Glu Glu Gln Val Gln Glu Leu Glu Ser Leu Ile Ser  
 1345 1350 1355 1360  
 Ser Leu Gln Gln Gln Leu Lys Glu Thr Glu Gln Asn Tyr Glu Ala Glu  
 1365 1370 1375  
 Ile His Cys Leu Gln Lys Arg Leu Gln Ala Val Ser Glu Ser Thr Val  
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 Pro Pro Ser Leu Pro Val Asp Ser Val Val Ile Thr Glu Ser Asp Ala  
 1395 1400 1405  
 Gln Arg Thr Met Tyr Pro Gly Ser Cys Val Lys Lys Asn Ile Asp Gly  
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 Thr Ile Glu Phe Ser Gly Glu Phe Gly Val Lys Glu Glu Thr Asn Ile  
 1425 1430 1435 1440  
 Val Lys Leu Leu Glu Lys Gln Tyr Gln Glu Gln Leu Glu Glu Val  
 1445 1450 1455  
 Ala Lys Val Ile Val Ser Met Ser Ile Ala Phe Ala Gln Gln Thr Glu  
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 Leu Ser Arg Ile Ser Gly Gly Lys Glu Asn Thr Ala Ser Ser Lys Gln  
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 Ala His Ala Val Cys Gln Gln Glu Gln His Tyr Phe Asn Glu Met Lys  
 1490 1495 1500  
 Leu Ser Gln Asp Gln Ile Gly Phe Gln Thr Phe Glu Thr Val Asp Val  
 1505 1510 1515 1520  
 Lys Phe Lys Glu Glu Phe Lys Pro Leu Ser Lys Glu Leu Gly Glu His  
 1525 1530 1535  
 Gly Lys Glu Ile Leu Ser Asn Ser Asp Pro His Asp Ile Pro Glu  
 1540 1545 1550  
 Ser Lys Asp Cys Val Leu Thr Ile Ser Glu Glu Met Phe Ser Lys Asp  
 1555 1560 1565  
 Lys Thr Phe Ile Val Arg Gln Ser Ile His Asp Glu Ile Ser Val Ser  
 1570 1575 1580  
 Ser Met Asp Ala Ser Arg Gln Leu Met Leu Asn Glu Glu Gln Leu Glu  
 1585 1590 1595 1600  
 Asp Met Arg Gln Glu Leu Val Arg Gln Tyr Gln Glu His Gln Gln Ala  
 1605 1610 1615  
 Thr Gln Arg Ser Ser Ile Asp Asn Glu Asn Leu Val Ser Glu Arg Glu  
 1620 1625 1630  
 Arg Val Leu Leu Glu Glu Leu Glu Ala Leu Lys Gln Leu Ser Leu Ala  
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 Gly Arg Glu Lys Leu Cys Cys Glu Leu Arg Asn Ser Ser Thr Gln Thr  
 1650 1655 1660  
 Gln Asn Gly Asn Glu Asn Gln Gly Glu Val Glu Glu Gln Thr Phe Lys  
 1665 1670 1675 1680  
 Glu Lys Glu Leu Asp Arg Lys Pro Glu Asp Val Pro Pro Glu Ile Leu  
 1685 1690 1695  
 Ser Asn Glu Arg Tyr Ala Leu Gln Lys Ala Asn Asn Arg Leu Leu Lys  
 1700 1705 1710  
 Ile Leu Leu Glu Val Val Lys Thr Thr Ala Ala Val Glu Glu Thr Ile  
 1715 1720 1725  
 Gly Arg His Val Leu Gly Ile Leu Asp Arg Ser Ser Lys Ser Gln Ser  
 1730 1735 1740  
 Ser Ala Ser Leu Ile Trp Arg Ser Glu Ala Glu Ala Ser Val Lys Ser  
 1745 1750 1755 1760  
 Cys Val His Glu Glu His Thr Arg Val Thr Asp Glu Ser Ile Pro Ser  
 1765 1770 1775  
 Tyr Ser Gly Ser Asp Met Pro Arg Asn Asp Ile Asn Met Trp Ser Lys  
 1780 1785 1790  
 Val Thr Glu Glu Gly Thr Glu Leu Ser Gln Arg Leu Val Arg Ser Gly

1795	1800	1805
Phe Ala Gly Thr Glu Ile Asp Pro	Glu Asn Glu Glu	Leu Met Leu Asn
1810	1815	1820
Ile Ser Ser Arg Leu Gln Ala Ala Val	Glu Lys Leu Leu Glu Ala Ile	
1825	1830	1835
Ser Glu Thr Ser Ser Gln Leu Glu His	Ala Lys Val Thr Gln Thr Glu	1840
1845	1850	1855
Leu Met Arg Glu Ser Phe Arg Gln	Lys Gln Glu Ala Thr Glu Ser Leu	
1860	1865	1870
Lys Cys Gln Glu Glu Leu Arg Glu Arg	Leu His Glu Glu Ser Arg Ala	
1875	1880	1885
Arg Glu Gln Leu Ala Val Glu Leu Ser	Lys Ala Glu Gly Val Ile Asp	
1890	1895	1900
Gly Tyr Ala Asp Glu Lys Thr Leu Phe	Glu Arg Gln Ile Gln Glu Lys	
1905	1910	1915
Thr Asp Ile Ile Asp Arg Leu Glu Gln	Glu Leu Leu Cys Ala Ser Asn	
1925	1930	1935
Arg Leu Gln Glu Leu Glu Ala Glu Gln	Gln Ile Gln Glu Glu Arg	
1940	1945	1950
Glu Leu Leu Ser Arg Gln Lys Glu Ala	Met Lys Ala Glu Ala Gly Pro	
1955	1960	1965
Val Glu Gln Gln Leu Leu Gln Glu	Thr Glu Lys Leu Met Lys Glu Lys	
1970	1975	1980
Leu Glu Val Gln Cys Gln Ala Glu Lys	Val Arg Asp Asp Leu Gln Lys	
1985	1990	1995
Gln Val Lys Ala Leu Glu Ile Asp Val	Glu Gln Val Ser Arg Phe	
2005	2010	2015
Ile Glu Leu Glu Gln Glu Lys Asn	Thr Glu Leu Met Asp Leu Arg Gln	
2020	2025	2030
Gln Asn Gln Ala Leu Glu Lys Gln	Leu Glu Lys Met Arg Lys Phe Leu	
2035	2040	2045
Asp Glu Gln Ala Ile Asp Arg Glu His	Glu Arg Asp Val Phe Gln Gln	
2050	2055	2060
Glu Ile Gln Lys Leu Glu Gln Leu Lys	Val Val Pro Arg Phe Gln	
2065	2070	2075
Pro Ile Ser Glu His Gln Thr Arg Glu	Val Glu Gln Leu Ala Asn His	
2085	2090	2095
Leu Lys Glu Lys Thr Asp Lys Cys	Ser Glu Leu Leu Ser Lys Glu	
2100	2105	2110
Gln Leu Gln Arg Asp Ile Gln Glu Arg	Asn Glu Glu Ile Glu Lys Leu	
2115	2120	2125
Glu Phe Arg Val Arg Glu Leu Glu Gln	Ala Leu Leu Val Ser Ala Asp	
2130	2135	2140
Thr Phe Gln Lys Val Glu Asp Arg Lys	His Phe Gly Ala Val Glu Ala	
2145	2150	2155
Lys Pro Glu Leu Ser Leu Glu Val Gln	Leu Gln Ala Glu Arg Asp Ala	
2165	2170	2175
Ile Asp Arg Lys Glu Lys Glu Ile	Thr Asn Leu Glu Glu Gln Leu Glu	
2180	2185	2190
Gln Phe Arg Glu Glu Leu Glu Asn	Lys Asn Glu Glu Val Gln Gln Leu	
2195	2200	2205
His Met Gln Leu Glu Ile Gln Lys	Lys Glu Ser Thr Thr Arg Leu Gln	
2210	2215	2220
Glu Leu Glu Gln Glu Asn Lys Leu	Phe Lys Asp Asp Met Glu Lys Leu	
2225	2230	2235
Gly Leu Ala Ile Lys Glu Ser Asp Ala	Met Ser Thr Gln Asp Gln His	
2245	2250	2255
Val Leu Phe Gly Lys Phe Ala Gln	Ile Ile Gln Glu Lys Glu Val Glu	
2260	2265	2270
Ile Asp Gln Leu Asn Glu Gln Val	Thr Lys Leu Gln Gln Leu Lys	
2275	2280	2285
Ile Thr Thr Asp Asn Lys Val Ile	Glu Glu Lys Asn Glu Leu Ile Arg	
2290	2295	2300

Asp Leu Glu Thr Gln Ile Glu Cys Leu Met Ser Asp Gln Glu Cys Val  
 2305 2310 2315 2320  
 Lys Arg Asn Arg Glu Glu Glu Ile Glu Gln Leu Asn Glu Val Ile Glu  
 2325 2330 2335  
 Lys Leu Gln Gln Glu Leu Ala Asn Ile Gly Gln Lys Thr Ser Met Asn  
 2340 2345 2350  
 Ala His Ser Leu Ser Glu Glu Ala Asp Ser Leu Lys His Gln Leu Asp  
 2355 2360 2365  
 Val Val Ile Ala Glu Lys Leu Ala Leu Glu Gln Gln Val Glu Thr Ala  
 2370 2375 2380  
 Asn Glu Glu Met Thr Phe Met Lys Asn Val Leu Lys Glu Thr Asn Phe  
 2385 2390 2395 2400  
 Lys Met Asn Gln Leu Thr Gln Glu Leu Phe Ser Leu Lys Arg Glu Arg  
 2405 2410 2415  
 Glu Ser Val Glu Lys Ile Gln Ser Ile Pro Glu Asn Ser Val Asn Val  
 2420 2425 2430  
 Ala Ile Asp His Leu Ser Lys Asp Lys Pro Glu Leu Glu Val Val Leu  
 2435 2440 2445  
 Thr Glu Asp Ala Leu Lys Ser Leu Glu Asn Gln Thr Tyr Phe Lys Ser  
 2450 2455 2460  
 Phe Glu Glu Asn Gly Lys Gly Ser Ile Ile Asn Leu Glu Thr Arg Leu  
 2465 2470 2475 2480  
 Leu Gln Leu Glu Ser Thr Val Ser Ala Lys Asp Leu Glu Leu Thr Gln  
 2485 2490 2495  
 Cys Tyr Lys Gln Ile Lys Asp Met Gln Glu Gln Gly Gln Phe Glu Thr  
 2500 2505 2510  
 Glu Met Leu Gln Lys Lys Ile Val Asn Leu Gln Lys Ile Val Glu Glu  
 2515 2520 2525  
 Lys Val Ala Ala Ala Leu Val Ser Gln Ile Gln Leu Glu Ala Val Gln  
 2530 2535 2540  
 Glu Tyr Ala Lys Phe Cys Gln Asp Asn Gln Thr Ile Ser Ser Glu Pro  
 2545 2550 2555 2560  
 Glu Arg Thr Asn Ile Gln Asn Leu Asn Gln Leu Arg Glu Asp Glu Leu  
 2565 2570 2575  
 Gly Ser Asp Ile Ser Ala Leu Thr Leu Arg Ile Ser Glu Leu Glu Ser  
 2580 2585 2590  
 Gln Val Val Glu Met His Thr Ser Leu Ile Leu Glu Lys Glu Gln Val  
 2595 2600 2605  
 Glu Ile Ala Glu Lys Asn Val Leu Glu Lys Glu Lys Leu Leu Glu  
 2610 2615 2620  
 Leu Gln Lys Leu Leu Glu Gly Asn Glu Lys Lys Gln Arg Glu Lys Glu  
 2625 2630 2635 2640  
 Lys Lys Arg Ser Pro Gln Asp Val Glu Val Leu Lys Thr Thr Glu  
 2645 2650 2655  
 Leu Phe His Ser Asn Glu Glu Ser Gly Phe Phe Asn Glu Leu Glu Ala  
 2660 2665 2670  
 Leu Arg Ala Glu Ser Val Ala Thr Lys Ala Glu Leu Ala Ser Tyr Lys  
 2675 2680 2685  
 Glu Lys Ala Glu Lys Leu Gln Glu Glu Leu Leu Val Lys Glu Thr Asn  
 2690 2695 2700  
 Met Thr Ser Leu Gln Lys Asp Leu Ser Gln Val Arg Asp His Leu Ala  
 2705 2710 2715 2720  
 Glu Ala Lys Glu Lys Leu Ser Ile Leu Glu Lys Glu Asp Glu Thr Glu  
 2725 2730 2735  
 Val Gln Glu Ser Lys Lys Ala Cys Met Phe Glu Pro Leu Pro Ile Lys  
 2740 2745 2750  
 Leu Ser Lys Ser Ile Ala Ser Gln Thr Asp Gly Thr Leu Lys Ile Ser  
 2755 2760 2765  
 Ser Ser Asn Gln Thr Pro Gln Ile Leu Val Lys Asn Ala Gly Ile Gln  
 2770 2775 2780  
 Ile Asn Leu Gln Ser Glu Cys Ser Ser Glu Glu Val Thr Glu Ile Ile  
 2785 2790 2795 2800  
 Ser Gln Phe Thr Glu Lys Ile Glu Lys Met Gln Glu Leu His Ala Ala

2805	2810	2815	
Glu Ile Leu Asp Met Glu Ser Arg His	Ile Ser Glu Thr Glu Thr Leu		
2820	2825	2830	
Lys Arg Glu His Tyr Val Ala Val Gln Leu Leu Lys Glu Glu Cys Gly			
2835	2840	2845	
Thr Leu Lys Ala Val Ile Gln Cys Leu Arg Ser Lys Glu Val Phe Gly			
2850	2855	2860	
Phe Tyr Asn Met Cys Phe Ser Thr Leu Cys Asp Ser Gly Ser Asp Trp			
2865	2870	2875	2880
Gly Gln Gly Ile Tyr Leu Thr His Ser Gln Gly Phe Asp Ile Ala Ser			
2885	2890	2895	
Glu Gly Arg Gly Glu Glu Ser Glu Ser Ala Thr Asp Ser Phe Pro Lys			
2900	2905	2910	
Lys Ile Lys Gly Leu Leu Arg Ala Val His Asn Glu Gly Met Gln Val			
2915	2920	2925	
Leu Ser Leu Thr Glu Ser Pro Tyr Ser Asp Gly Glu Asp His Ser Ile			
2930	2935	2940	
Gln Gln Val Ser Glu Pro Trp Leu Glu Glu Arg Lys Ala Tyr Ile Asn			
2945	2950	2955	2960
Thr Ile Ser Ser Leu Lys Asp Leu Ile Thr Lys Met Gln Leu Gln Arg			
2965	2970	2975	
Glu Ala Glu Val Tyr Asp Ser Ser Gln Ser His Glu Ser Phe Ser Asp			
2980	2985	2990	
Trp Arg Gly Glu Leu Leu Leu Ala Gln Gln Val Phe Leu Glu Glu			
2995	3000	3005	
Arg Ser Val Leu Leu Ala Ala Phe Arg Thr Glu Leu Thr Ala Leu Gly			
3010	3015	3020	
Thr Thr Asp Ala Val Gly Leu Leu Asn Cys Leu Glu Gln Arg Ile Gln			
3025	3030	3035	3040
Glu Gln Gly Val Glu Tyr Gln Ala Ala Met Glu Cys Leu Gln Lys Ala			
3045	3050	3055	
Asp Arg Arg Ser Leu Leu Ser Glu Ile Gln Ala Leu His Ala Gln Met			
3060	3065	3070	
Asn Gly Arg Lys Ile Thr Leu Lys Arg Glu Gln Glu Ser Glu Lys Pro			
3075	3080	3085	
Ser Gln Glu Leu Leu Glu Tyr Asn Ile Gln Gln Lys Gln Ser Gln Met			
3090	3095	3100	
Leu Glu Met Gln Val Glu Leu Ser Ser Met Lys Asp Arg Ala Thr Glu			
3105	3110	3115	3120
Leu Gln Glu Gln Leu Ser Ser Glu Lys Met Val Val Ala Glu Leu Lys			
3125	3130	3135	
Ser Glu Leu Ala Gln Thr Lys Leu Glu Leu Glu Thr Thr Leu Lys Ala			
3140	3145	3150	
Gln His Lys His Leu Lys Glu Leu Glu Ala Phe Arg Leu Glu Val Lys			
3155	3160	3165	
Asp Lys Thr Asp Glu Val His Leu Leu Asn Asp Thr Leu Ala Ser Glu			
3170	3175	3180	
Gln Lys Lys Ser Arg Glu Leu Gln Trp Ala Leu Glu Lys Glu Lys Ala			
3185	3190	3195	3200
Lys Leu Gly Arg Ser Glu Glu Arg Asp Lys Glu Glu Leu Glu Asp Leu			
3205	3210	3215	
Lys Phe Ser Leu Glu Ser Gln Lys Gln Arg Asn Leu Gln Leu Asn Leu			
3220	3225	3230	
Leu Leu Glu Gln Gln Lys Gln Leu Leu Asn Glu Ser Gln Gln Lys Ile			
3235	3240	3245	
Glu Ser Gln Arg Met Leu Tyr Asp Ala Gln Leu Ser Glu Glu Gln Gly			
3250	3255	3260	
Arg Asn Leu Glu Leu Gln Val Leu Leu Glu Ser Glu Lys Val Arg Ile			
3265	3270	3275	3280
Arg Glu Met Ser Ser Thr Leu Asp Arg Glu Arg Glu Leu His Ala Gln			
3285	3290	3295	
Leu Gln Ser Ser Asp Gly Thr Gly Gln Ser Arg Pro Pro Leu Pro Ser			
3300	3305	3310	

Glu Asp Leu Leu Lys Glu Leu Gln Lys Gln Leu Glu Glu Lys His Ser  
 3315 3320 3325  
 Arg Ile Val Glu Leu Leu Asn Glu Thr Glu Lys Tyr Lys Leu Asp Ser  
 3330 3335 3340  
 Leu Gln Thr Arg Gln Gln Met Glu Lys Asp Arg Gln Val His Arg Lys  
 3345 3350 3355 3360  
 Thr Leu Gln Thr Glu Gln Glu Ala Asn Thr Glu Gly Gln Lys Lys Met  
 3365 3370 3375  
 His Glu Leu Gln Ser Lys Val Glu Asp Leu Gln Arg Gln Leu Glu Glu  
 3380 3385 3390  
 Lys Arg Gln Gln Val Tyr Lys Leu Asp Leu Glu Gly Gln Arg Leu Gln  
 3395 3400 3405  
 Gly Ile Met Gln Glu Phe Gln Lys Gln Glu Leu Glu Arg Glu Glu Lys  
 3410 3415 3420  
 Arg Glu Ser Arg Arg Ile Leu Tyr Gln Asn Leu Asn Glu Pro Thr Thr  
 3425 3430 3435 3440  
 Trp Ser Leu Thr Ser Asp Arg Thr Arg Asn Trp Val Leu Gln Gln Lys  
 3445 3450 3455  
 Ile Glu Gly Glu Thr Lys Glu Ser Asn Tyr Ala Lys Leu Ile Glu Met  
 3460 3465 3470  
 Asn Gly Gly Thr Gly Cys Asn His Glu Leu Glu Met Ile Arg Gln  
 3475 3480 3485  
 Lys Leu Gln Cys Val Ala Ser Lys Leu Gln Val Leu Pro Gln Lys Ala  
 3490 3495 3500  
 Ser Glu Arg Leu Gln Phe Glu Thr Ala Asp Asp Glu Asp Phe Ile Trp  
 3505 3510 3515 3520  
 Val Gln Glu Asn Ile Asp Glu Ile Ile Leu Gln Leu Gln Lys Leu Thr  
 3525 3530 3535  
 Gly Gln Gln Gly Glu Glu Pro Ser Leu Val Ser Pro Ser Thr Ser Cys  
 3540 3545 3550  
 Gly Ser Leu Thr Glu Arg Leu Leu Arg Gln Asn Ala Glu Leu Thr Gly  
 3555 3560 3565  
 His Ile Ser Gln Leu Thr Glu Glu Lys Asn Asp Leu Arg Asn Met Val  
 3570 3575 3580  
 Met Lys Leu Glu Glu Gln Ile Arg Trp Tyr Arg Gln Thr Gly Ala Gly  
 3585 3590 3595 3600  
 Arg Asp Asn Ser Ser Arg Phe Ser Leu Asn Gly Gly Ala Asn Ile Glu  
 3605 3610 3615  
 Ala Ile Ile Ala Ser Glu Lys Glu Val Trp Asn Arg Glu Lys Leu Thr  
 3620 3625 3630  
 Leu Gln Lys Ser Leu Lys Arg Ala Glu Ala Glu Val Tyr Lys Leu Lys  
 3635 3640 3645  
 Ala Glu Leu Arg Asn Asp Ser Leu Leu Gln Thr Leu Ser Pro Asp Ser  
 3650 3655 3660  
 Glu His Val Thr Leu Lys Arg Ile Tyr Gly Lys Tyr Leu Arg Ala Glu  
 3665 3670 3675 3680  
 Ser Phe Arg Lys Ala Leu Ile Tyr Gln Lys Lys Tyr Leu Leu Leu  
 3685 3690 3695  
 Leu Gly Gly Phe Gln Glu Cys Glu Asp Ala Thr Leu Ala Leu Leu Ala  
 3700 3705 3710  
 Arg Met Gly Gly Gln Pro Ala Phe Thr Asp Leu Glu Val Ile Thr Asn  
 3715 3720 3725  
 Arg Pro Lys Gly Phe Thr Arg Phe Arg Ser Ala Val Arg Val Ser Ile  
 3730 3735 3740  
 Ala Ile Ser Arg Met Lys Phe Leu Val Arg Arg Trp His Arg Val Thr  
 3745 3750 3755 3760  
 Gly Ser Val Ser Ile Asn Ile Asn Arg Asp Gly Phe Gly Leu Asn Gln  
 3765 3770 3775  
 Gly Ala Glu Lys Thr Asp Ser Phe Tyr His Ser Ser Gly Gly Leu Glu  
 3780 3785 3790  
 Leu Tyr Gly Glu Pro Arg His Thr Thr Tyr Arg Ser Arg Ser Asp Leu  
 3795 3800 3805  
 Asp Tyr Ile Arg Ser Pro Leu Pro Phe Gln Asn Arg Tyr Pro Gly Thr

3810	3815	3820
Pro Ala Asp Phe Asn Pro Gly Ser Leu Ala Cys Ser Gln Leu Gln Asn		
3825	3830	3840
Tyr Asp Pro Asp Arg Ala Leu Thr Asp Tyr Ile Thr Arg Leu Glu Ala		
3845	3850	3855
Leu Gln Arg Arg Leu Gly Thr Ile Gln Ser Gly Ser Thr Thr Gln Phe		
3860	3865	3870
His Ala Gly Met Arg Arg		
3875		

<210> 12  
<211> 1087  
<212> PRT  
<213> Oryctolagus cuniculus

<400> 12			
Arg Glu Lys Leu Glu Val Gln Cys Gln Ala Glu Lys Val Arg Asp Asp			
1	5	10	15
Leu Gln Lys Gln Val Lys Ala Leu Glu Ile Asp Val Glu Glu Gln Val			
20	25	30	
Cys Arg Phe Ile Glu Leu Glu Gln Glu Lys Asn Ala Glu Leu Met Asp			
35	40	45	
Leu Arg Gln Gln Asn Gln Ala Leu Glu Lys Gln Leu Glu Lys Met Arg			
50	55	60	
Lys Met Asp Leu Arg Gln Gln Asn Gln Ala Leu Glu Lys Gln Leu Glu			
65	70	75	80
Lys Met Arg Lys Phe Leu Asp Glu Gln Ala Ile Asp Arg Glu His Glu			
85	90	95	
Arg Asp Val Phe Gln Gln Glu Ile Gln Lys Leu Glu Gln Gln Leu Lys			
100	105	110	
Leu Val Pro Arg Phe Gln Pro Ile Ser Glu His Gln Thr Arg Glu Val			
115	120	125	
Glu Gln Leu Thr Asn His Leu Lys Glu Lys Thr Asp Lys Cys Ser Glu			
130	135	140	
Leu Leu Leu Ser Lys Glu Gln Leu Gln Arg Asp Val Gln Glu Arg Asn			
145	150	155	160
Glu Glu Ile Glu Lys Leu Glu Cys Arg Val Arg Glu Leu Glu Gln Ala			
165	170	175	
Leu Leu Ser Val Gln Thr Leu Ser Lys Arg Trp Arg Thr Arg Asn Ser			
180	185	190	
Phe Gly Ala Val Glu Pro Lys Ala Glu Leu Cys Leu Glu Val Gln Leu			
195	200	205	
Gln Ala Glu Arg Asp Ala Ile Asp Arg Lys Glu Lys Glu Ile Thr Asn			
210	215	220	
Leu Glu Glu Gln Leu Glu Gln Phe Arg Glu Glu Leu Glu Asn Lys Asn			
225	230	235	240
Glu Glu Val Gln Gln Leu His Met Gln Leu Glu Ile Gln Lys Lys Glu			
245	250	255	
Ser Thr Thr Arg Leu Gln Glu Leu Glu Gln Glu Asn Lys Leu Phe Lys			
260	265	270	
Asp Glu Met Glu Lys Leu Gly Phe Ala Ile Lys Glu Ser Asp Ala Val			
275	280	285	
Ser Pro Gln Asp Gln Gln Val Leu Phe Gly Lys Phe Ala Gln Ile Ile			
290	295	300	
His Glu Lys Glu Val Glu Ile Asp Arg Leu Asn Glu Gln Ile Ile Lys			
305	310	315	320
Leu Gln Gln Leu Lys Ile Thr Thr Asp Asn Lys Val Ile Glu Glu			
325	330	335	
Lys Asn Glu Leu Ile Arg Asp Leu Glu Ala Gln Ile Glu Cys Leu Met			
340	345	350	
Ser Asp Gln Glu Arg Val Arg Lys Asn Arg Glu Glu Ile Glu Gln			
355	360	365	

Leu Asn Glu Val Ile Glu Lys Leu Gln Gln Glu Leu Ala Asn Ile Asp  
 370 375 380  
 Gln Lys Thr Ser Val Asp Pro Ser Ser Leu Ser Glu Glu Ala Asp Ser  
 385 390 395 400  
 Leu Lys His Gln Leu Asp Lys Val Ile Ala Glu Lys Leu Ala Leu Glu  
 405 410 415  
 His Gln Val Glu Thr Thr Asn Glu Glu Met Ala Val Thr Lys Asn Val  
 420 425 430  
 Leu Lys Glu Thr Asn Phe Lys Met Asn Gln Leu Thr Gln Glu Leu Cys  
 435 440 445  
 Ser Leu Lys Arg Glu Arg Glu Lys Met Glu Arg Ile Gln Ser Val Pro  
 450 455 460  
 Glu Lys Ser Val Asn Met Ser Val Gly Asp Leu Ser Lys Asp Lys Pro  
 465 470 475 480  
 Glu Met Asp Leu Ile Pro Thr Glu Asp Ala Leu Ala Gln Leu Glu Thr  
 485 490 495  
 Gln Thr Gln Leu Arg Ser Ser Glu Glu Ser Ser Lys Val Ser Leu Ser  
 500 505 510  
 Ser Leu Glu Thr Lys Leu Leu Gln Leu Glu Ser Thr Val Ser Thr Lys  
 515 520 525  
 Asp Leu Glu Leu Thr Gln Cys Tyr Lys Gln Ile Gln Asp Met Arg Glu  
 530 535 540  
 Gln Gly Arg Ser Glu Thr Glu Met Leu Gln Thr Lys Ile Val Ser Leu  
 545 550 555 560  
 Gln Lys Val Leu Glu Lys Val Ala Ala Leu Val Ser Gln Val  
 565 570 575  
 Gln Leu Glu Ala Val Gln Glu Tyr Val Lys Leu Cys Ala Asp Lys Pro  
 580 585 590  
 Ala Val Ser Ser Asp Pro Ala Arg Thr Glu Val Pro Gly Leu Ser Gln  
 595 600 605  
 Leu Ala Gly Asn Thr Met Glu Ser Asp Val Ser Ala Leu Thr Trp Arg  
 610 615 620  
 Ile Ser Glu Leu Glu Ser Gln Leu Val Glu Met His Ser Ser Leu Ile  
 625 630 635 640  
 Ser Glu Lys Glu Gln Val Glu Ile Ala Glu Lys Asn Ala Leu Glu Lys  
 645 650 655  
 Glu Lys Lys Leu Gln Glu Leu Gln Lys Leu Val Gln Asp Ser Glu Thr  
 660 665 670  
 Lys Gln Arg Glu Arg Glu Arg Gln Ser Arg Leu His Gly Asp Leu Gly  
 675 680 685  
 Val Leu Glu Ser Thr Thr Ser Glu Glu Ser Gly Val Phe Gly Glu Leu  
 690 695 700  
 Glu Ala Leu Arg Ala Glu Ser Ala Ala Pro Lys Gly Glu Leu Ala Asn  
 705 710 715 720  
 Tyr Lys Glu Leu Ala Glu Lys Leu Gln Glu Leu Leu Val Lys Glu  
 725 730 735  
 Thr Asn Met Ala Ser Leu Pro Lys Glu Leu Ser His Val Arg Asp Gln  
 740 745 750  
 Leu Thr Glu Ala Glu Asp Lys Leu Ser His Phe Ser Glu Lys Glu Asp  
 755 760 765  
 Lys Thr Glu Val Gln Glu His Gly Thr Ile Cys Ile Leu Glu Pro Cys  
 770 775 780  
 Pro Gly Gln Ile Gly Glu Ser Phe Ala Ser Gln Thr Glu Gly Ala Val  
 785 790 795 800  
 Gln Val Asn Ser His Thr Gln Thr Pro Gln Ile Pro Val Arg Ser Val  
 805 810 815  
 Gly Ile Gln Thr His Ser Gln Ser Asp Ser Ser Pro Glu Glu Val Ala  
 820 825 830  
 Glu Ile Ile Ser Arg Phe Thr Glu Lys Ile Glu Gln Met Arg Glu Leu  
 835 840 845  
 His Ala Ala Glu Ile Leu Asp Met Glu Ser Arg His Ile Ser Glu Thr  
 850 855 860  
 Glu Thr Leu Lys Arg Glu His Cys Ile Ala Val Gln Leu Leu Thr Glu

865	870	875	880												
Glu	Cys	Ala	Ser	Leu	Lys	Ser	Leu	Ile	Gln	Gly	Leu	Arg	Met	Pro	Glu
885	890	895													
Gly	Ser	Ser	Val	Pro	Glu	Leu	Thr	His	Ser	Asn	Ala	Tyr	Gln	Thr	Arg
900	905	910													
Glu	Val	Gly	Ser	Ser	Asp	Ser	Gly	Ser	Asp	Trp	Gly	Gln	Gly	Ile	Tyr
915	920	925													
Leu	Thr	Gln	Ser	Gln	Gly	Phe	Asp	Thr	Ala	Ser	Glu	Ala	Arg	Gly	Glu
930	935	940													
Glu	Gly	Glu	Thr	Ser	Thr	Asp	Ser	Phe	Pro	Lys	Lys	Ile	Lys	Gly	Leu
945	950	955													
Leu	Arg	Ala	Val	His	Asn	Glu	Gly	Met	Gln	Val	Leu	Ser	Leu	Thr	Glu
965	970	975													
Gly	Pro	Cys	Gly	Asp	Gly	Glu	Asp	Tyr	Pro	Gly	His	Gln	Leu	Ser	Glu
980	985	990													
Ser	Trp	Leu	Glu	Glu	Arg	Arg	Ala	Tyr	Leu	Ser	Thr	Ile	Ser	Ser	Leu
995	1000	1005													
Lys	Asp	Phe	Ile	Thr	Lys	Met	Gln	Val	Gln	Arg	Glu	Val	Glu	Val	Tyr
1010	1015	1020													
Asp	Ser	Ser	Gln	Ser	His	Glu	Asn	Ile	Ser	Asp	Trp	Arg	Gly	Glu	Leu
1025	1030	1035													
Leu	Leu	Ala	Leu	Gln	Gln	Val	Phe	Leu	Arg	Glu	Arg	Ser	Val	Leu	Leu
1045	1050	1055													
Ala	Ala	Phe	Lys	Thr	Glu	Leu	Thr	Ala	Leu	Gly	Thr	Arg	Asp	Ala	Ala
1060	1065	1070													
Gly	Leu	Leu	Asn	Cys	Leu	Glu	Gln	Arg	Ile	Pro	Arg	Thr	Glu	Tyr	
1075	1080	1085													

<210> 13																
<211> 503																
<212> PRT																
<213> Drosophila melanogaster																
<400> 13																
Met	Asp	Ser	Asp	Asn	Asp	Asn	Asp	Phe	Cys	Asp	Asn	Val	Asp	Ser	Gly	
1	5	10	15													
Asn	Val	Ser	Ser	Gly	Asp	Asp	Gly	Asp	Asp	Asp	Phe	Gly	Met	Glu	Val	
20	25	30														
Asp	Leu	Pro	Ser	Ser	Ala	Asp	Arg	Gln	Met	Asp	Gln	Asp	Asp	Tyr	Gln	
35	40	45														
Tyr	Lys	Val	Leu	Thr	Thr	Asp	Glu	Ile	Val	Gln	His	Gln	Arg	Glu	Ile	
50	55	60														
Ile	Asp	Glu	Ala	Asn	Leu	Leu	Lys	Leu	Pro	Thr	Pro	Thr	Thr	Arg		
65	70	75	80													
Ile	Leu	Leu	Asn	His	Phe	Lys	Trp	Asp	Lys	Glu	Lys	Leu	Glu	Lys		
85	90	95														
Tyr	Phe	Asp	Asp	Asn	Thr	Asp	Glu	Phe	Phe	Lys	Cys	Ala	His	Val	Ile	
100	105	110														
Asn	Pro	Phe	Asn	Ala	Thr	Glu	Ala	Ile	Lys	Gln	Lys	Thr	Ser	Arg	Ser	
115	120	125														
Gln	Cys	Glu	Glu	Cys	Glu	Ile	Cys	Phe	Ser	Gln	Leu	Pro	Pro	Asp	Ser	
130	135	140														
Met	Ala	Gly	Leu	Glu	Cys	Gly	His	Arg	Phe	Cys	Met	Pro	Cys	Trp	His	
145	150	155	160													
Glu	Tyr	Leu	Ser	Thr	Lys	Ile	Val	Ala	Glu	Gly	Leu	Gly	Gln	Thr	Ile	
165	170	175														
Ser	Cys	Ala	Ala	His	Gly	Cys	Asp	Ile	Leu	Val	Asp	Asp	Val	Thr	Val	
180	185	190														
Ala	Asn	Leu	Val	Thr	Asp	Ala	Arg	Val	Arg	Val	Lys	Tyr	Gln	Gln	Leu	
195	200	205														
Ile	Thr	Asn	Ser	Phe	Val	Glu	Cys	Asn	Gln	Leu	Leu	Arg	Trp	Cys	Pro	
210	215	220														
Ser	Val	Asp	Cys	Thr	Tyr	Ala	Val	Lys	Val	Pro	Tyr	Ala	Glu	Pro	Arg	

225	230	235	240
Arg Val His Cys Lys Cys Gly His Val Phe Cys Phe Ala Cys Gly Glu			
245	250	255	
Asn Trp His Asp Pro Val Lys Cys Arg Trp Leu Lys Lys Trp Ile Lys			
260	265	270	
Lys Cys Asp Asp Asp Ser Glu Thr Ser Asn Trp Ile Ala Ala Asn Thr			
275	280	285	
Lys Glu Cys Pro Arg Cys Ser Val Thr Ile Glu Lys Asp Gly Gly Cys			
290	295	300	
Asn His Met Val Cys Lys Asn Gln Asn Cys Lys Asn Glu Phe Cys Trp			
305	310	315	320
Val Cys Leu Gly Ser Trp Glu Pro His Gly Ser Ser Trp Tyr Asn Cys			
325	330	335	
Asn Arg Tyr Asp Glu Asp Glu Ala Lys Thr Ala Arg Asp Ala Gln Glu			
340	345	350	
Lys Leu Arg Ser Ser Leu Ala Arg Tyr Leu His Tyr Tyr Asn Arg Tyr			
355	360	365	
Met Asn His Met Gln Ser Met Lys Phe Glu Asn Lys Leu Tyr Ala Ser			
370	375	380	
Val Lys Gln Lys Met Glu Glu Met Gln Gln His Asn Met Ser Trp Ile			
385	390	395	400
Glu Val Gln Phe Leu Lys Lys Ala Val Asp Ile Leu Cys Gln Cys Arg			
405	410	415	
Gln Thr Leu Met Tyr Thr Tyr Val Phe Ala Tyr Tyr Leu Lys Lys Asn			
420	425	430	
Asn Gln Ser Met Ile Phe Glu Asp Asn Gln Lys Asp Leu Glu Ser Ala			
435	440	445	
Thr Glu Met Leu Ser Glu Tyr Leu Glu Arg Asp Ile Thr Ser Glu Asn			
450	455	460	
Leu Ala Asp Ile Lys Gln Lys Val Gln Asp Lys Tyr Arg Tyr Cys Glu			
465	470	475	480
Lys Arg Cys Ser Val Leu Leu Lys His Val His Glu Gly Tyr Asp Lys			
485	490	495	
Glu Trp Trp Glu Tyr Thr Glu			
500			

<210> 14  
<211> 961  
<212> PRT  
<213> Homo sapiens

<400> 14			
Met Leu Leu Leu Leu Leu Ala Pro Leu Phe Leu Arg Pro Pro Gly			
1	5	10	15
Ala Gly Gly Ala Gln Thr Pro Asn Ala Thr Ser Glu Gly Cys Gln Ile			
20	25	30	
Ile His Pro Pro Trp Glu Gly Ile Arg Tyr Arg Gly Leu Thr Arg			
35	40	45	
Asp Gln Val Lys Ala Ile Asn Phe Leu Pro Val Asp Tyr Glu Ile Glu			
50	55	60	
Tyr Val Cys Arg Gly Glu Arg Glu Val Val Gly Pro Lys Val Arg Lys			
65	70	75	80
Cys Leu Ala Asn Gly Ser Trp Thr Asp Met Asp Thr Pro Ser Arg Cys			
85	90	95	
Val Arg Ile Cys Ser Lys Ser Tyr Leu Thr Leu Glu Asn Gly Lys Val			
100	105	110	
Phe Leu Thr Gly Gly Asp Leu Pro Ala Leu Asp Gly Ala Arg Val Asp			
115	120	125	
Phe Arg Cys Asp Pro Asp Phe His Leu Val Gly Ser Ser Arg Ser Ile			
130	135	140	
Cys Ser Gln Gly Gln Trp Ser Thr Pro Lys Pro His Cys Gln Val Asn			
145	150	155	160

Arg Thr Pro His Ser Glu Arg Arg Ala Val Tyr Ile Gly Ala Leu Phe  
 165 170 175  
 Pro Met Ser Gly Gly Trp Pro Gly Gly Gln Ala Cys Gln Pro Ala Val  
 180 185 190  
 Glu Met Ala Leu Glu Asp Val Asn Ser Arg Arg Asp Ile Leu Pro Asp  
 195 200 205  
 Tyr Glu Leu Lys Leu Ile His His Asp Ser Lys Cys Asp Pro Gly Gln  
 210 215 220  
 Ala Thr Lys Tyr Leu Tyr Glu Leu Leu Tyr Asn Asp Pro Ile Lys Ile  
 225 230 235 240  
 Ile Leu Met Pro Gly Cys Ser Ser Val Ser Thr Leu Val Ala Glu Ala  
 245 250 255  
 Ala Arg Met Trp Asn Leu Ile Val Leu Ser Tyr Gly Ser Ser Pro  
 260 265 270  
 Ala Leu Ser Asn Arg Gln Arg Phe Pro Thr Phe Phe Arg Thr His Pro  
 275 280 285  
 Ser Ala Thr Leu His Asn Pro Thr Arg Val Lys Leu Phe Glu Lys Trp  
 290 295 300  
 Gly Trp Lys Lys Ile Ala Thr Ile Gln Gln Thr Thr Glu Val Phe Thr  
 305 310 315 320  
 Ser Thr Leu Asp Asp Leu Glu Glu Arg Val Lys Glu Ala Gly Ile Glu  
 325 330 335  
 Ile Thr Phe Arg Gln Ser Phe Phe Ser Asp Pro Ala Val Pro Val Lys  
 340 345 350  
 Asn Leu Lys Arg Gln Asp Ala Arg Ile Ile Val Gly Leu Phe Tyr Glu  
 355 360 365  
 Thr Glu Ala Arg Lys Val Phe Cys Glu Val Tyr Lys Glu Arg Leu Phe  
 370 375 380  
 Gly Lys Lys Tyr Val Trp Phe Leu Ile Gly Trp Tyr Ala Asp Asn Trp  
 385 390 395 400  
 Phe Lys Ile Tyr Asp Pro Ser Ile Asn Cys Thr Val Asp Glu Met Thr  
 405 410 415  
 Glu Ala Val Glu Gly His Ile Thr Thr Glu Ile Val Met Leu Asn Pro  
 420 425 430  
 Ala Asn Thr Arg Ser Ile Ser Asn Met Thr Ser Gln Glu Phe Val Glu  
 435 440 445  
 Lys Leu Thr Lys Arg Leu Lys Arg His Pro Glu Glu Thr Gly Gly Phe  
 450 455 460  
 Gln Glu Ala Pro Leu Ala Tyr Asp Ala Ile Trp Ala Leu Ala Leu Ala  
 465 470 475 480  
 Leu Asn Lys Thr Ser Gly Gly Gly Arg Ser Gly Val Arg Leu Glu  
 485 490 495  
 Asp Phe Asn Tyr Asn Asn Gln Thr Ile Thr Asp Gln Ile Tyr Arg Ala  
 500 505 510  
 Met Asn Ser Ser Ser Phe Glu Gly Val Ser Gly His Val Val Phe Asp  
 515 520 525  
 Ala Ser Gly Ser Arg Met Ala Trp Thr Leu Ile Glu Gln Leu Gln Gly  
 530 535 540  
 Gly Ser Tyr Lys Lys Ile Gly Tyr Tyr Asp Ser Thr Lys Asp Asp Leu  
 545 550 555 560  
 Ser Trp Ser Lys Thr Asp Lys Trp Ile Gly Gly Ser Pro Pro Ala Asp  
 565 570 575  
 Gln Thr Leu Val Ile Lys Thr Phe Arg Phe Leu Ser Gln Lys Leu Phe  
 580 585 590  
 Ile Ser Val Ser Val Leu Ser Ser Leu Gly Ile Val Leu Ala Val Val  
 595 600 605  
 Cys Leu Ser Phe Asn Ile Tyr Asn Ser His Val Arg Tyr Ile Gln Asn  
 610 615 620  
 Ser Gln Pro Asn Leu Asn Asn Leu Thr Ala Val Gly Cys Ser Leu Ala  
 625 630 635 640  
 Leu Ala Ala Val Phe Pro Leu Gly Leu Asp Gly Tyr His Ile Gly Arg  
 645 650 655  
 Asn Gln Phe Pro Phe Val Cys Gln Ala Arg Leu Trp Leu Leu Gly Leu

660	665	670
Gly Phe Ser Leu Gly Tyr Gly Ser Met Phe Thr Lys Ile Trp Trp Val		
675 680 685		
His Thr Val Phe Thr Lys Lys Glu Glu Lys Lys Glu Trp Arg Lys Thr		
690 695 700		
Leu Glu Pro Trp Lys Leu Tyr Ala Thr Val Gly Leu Leu Val Gly Met		
705 710 715 720		
Asp Val Leu Thr Leu Ala Ile Trp Gln Ile Val Asp Pro Leu His Arg		
725 730 735		
Thr Ile Glu Thr Phe Ala Lys Glu Glu Pro Lys Glu Asp Ile Asp Val		
740 745 750		
Ser Ile Leu Pro Gln Leu Glu His Cys Ser Ser Arg Lys Met Asn Thr		
755 760 765		
Trp Leu Gly Ile Phe Tyr Gly Tyr Lys Gly Leu Leu Leu Leu Gly		
770 775 780		
Ile Phe Leu Ala Tyr Glu Thr Lys Ser Val Ser Thr Glu Lys Ile Asn		
785 790 795 800		
Asp His Arg Ala Val Gly Met Ala Ile Tyr Asn Val Ala Val Leu Cys		
805 810 815		
Leu Ile Thr Ala Pro Val Thr Met Ile Leu Ser Ser Gln Gln Asp Ala		
820 825 830		
Ala Phe Ala Phe Ala Ser Leu Ala Ile Val Phe Ser Ser Tyr Ile Thr		
835 840 845		
Leu Val Val Leu Phe Val Pro Lys Met Arg Arg Leu Ile Thr Arg Gly		
850 855 860		
Glu Trp Gln Ser Glu Ala Gln Asp Thr Met Lys Thr Gly Ser Ser Thr		
865 870 875 880		
Asn Asn Asn Glu Glu Glu Lys Ser Arg Leu Leu Glu Lys Glu Asn Arg		
885 890 895		
Glu Leu Glu Lys Ile Ile Ala Glu Lys Glu Glu Arg Val Ser Glu Leu		
900 905 910		
Arg His Gln Leu Gln Ser Arg Gln Gln Leu Arg Ser Arg Arg His Pro		
915 920 925		
Pro Thr Pro Pro Glu Pro Ser Gly Gly Leu Pro Arg Gly Pro Pro Glu		
930 935 940		
Pro Pro Asp Arg Leu Ser Cys Asp Gly Ser Arg Val His Leu Leu Tyr		
945 950 955 960		
Lys		

<210> 15  
 <211> 281  
 <212> PRT  
 <213> *Saccharomyces cerevisiae*

<400> 15		
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Ser Pro Leu Asp Gly Ser Lys Ser Thr Asn Glu Asn Val Ser Ala Ser		
20 25 30		
Thr Ser Thr Ala Lys Pro Met Val Gly Gln Leu Ile Phe Asp Lys Phe		
35 40 45		
Ile Lys Thr Glu Glu Asp Pro Ile Ile Lys Gln Asp Thr Pro Ser Asn		
50 55 60		
Leu Asp Phe Asp Phe Ala Leu Pro Gln Thr Ala Thr Ala Pro Asp Ala		
65 70 75 80		
Lys Thr Val Leu Pro Ile Pro Glu Leu Asp Asp Ala Val Val Glu Ser		
85 90 95		
Phe Phe Ser Ser Ser Thr Asp Ser Thr Pro Met Phe Glu Tyr Glu Asn		
100 105 110		
Leu Glu Asp Asn Ser Lys Glu Trp Thr Ser Leu Phe Asp Asn Asp Ile		
115 120 125		

Pro	Val	Thr	Thr	Asp	Asp	Val	Ser	Leu	Ala	Asp	Lys	Ala	Ile	Glu	Ser
130						135					140				
Thr	Glu	Glu	Val	Ser	Leu	Val	Pro	Ser	Asn	Leu	Glu	Val	Ser	Thr	Thr
145						150					155				160
Ser	Phe	Leu	Pro	Thr	Pro	Val	Leu	Glu	Asp	Ala	Lys	Leu	Thr	Gln	Thr
						165					170				175
Arg	Lys	Val	Lys	Lys	Pro	Asn	Ser	Val	Val	Lys	Lys	Ser	His	His	Val
						180					185				190
Gly	Lys	Asp	Asp	Glu	Ser	Arg	Leu	Asp	His	Leu	Gly	Val	Val	Ala	Tyr
						195					200				205
Asn	Arg	Lys	Gln	Arg	Ser	Ile	Pro	Leu	Ser	Pro	Ile	Val	Pro	Glu	Ser
						210					215				220
Ser	Asp	Pro	Ala	Ala	Leu	Lys	Arg	Ala	Arg	Asn	Thr	Glu	Ala	Ala	Arg
225						230					235				240
Arg	Ser	Arg	Ala	Arg	Lys	Leu	Gln	Arg	Met	Lys	Gln	Leu	Glu	Asp	Lys
						245					250				255
Val	Glu	Glu	Leu	Leu	Ser	Lys	Asn	Tyr	His	Leu	Glu	Asn	Glu	Val	Ala
						260					265				270
Arg	Leu	Lys	Lys	Leu	Val	Gly	Glu	Arg							
						275					280				

<210> 16  
 <211> 957  
 <212> PRT  
 <213> Homo sapiens

<400> 16															
Met	Ala	Asp	Pro	Ala	Glu	Cys	Ser	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg
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Pro	Leu	Asn	Glu	Ala	Glu	Ile	Leu	Arg	Gly	Asp	Lys	Phe	Ile	Pro	Lys
															20
Phe	Lys	Gly	Asp	Glu	Thr	Val	Val	Ile	Gly	Gln	Gly	Lys	Pro	Tyr	Val
															35
Phe	Asp	Arg	Val	Leu	Pro	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val	Tyr	Asn
															50
Ala	Cys	Ala	Lys	Gln	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly
															65
Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met
															85
Glu	Gly	Lys	Leu	His	Asp	Pro	Gln	Leu	Met	Gly	Ile	Ile	Pro	Arg	Ile
															100
Ala	His	Asp	Ile	Phe	Asp	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu
															115
Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg
															130
Asp	Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ala	Val	His	Glu	Asp	Lys
145												155			160
Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser
															165
Pro	Glu	Glu	Val	Met	Asp	Val	Ile	Asp	Glu	Gly	Lys	Ala	Asn	Arg	His
															180
Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile
															195
Phe	Leu	Ile	Asn	Ile	Lys	Gln	Glu	Asn	Val	Glu	Thr	Glu	Lys	Lys	Leu
															210
Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser
225												235			240
Lys	Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn
															245
Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly
															260
Thr	Lys	Thr	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu
															280

275	280	285													
Gln	Asp	Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Ile	Val	Ile	Cys	Cys
290				295							300				
Ser	Pro	Ser	Val	Phe	Asn	Glu	Ala	Glu	Thr	Lys	Ser	Thr	Leu	Met	Phe
305				310						315					320
Gly	Gln	Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Val	Ser	Val	Asn	Leu	Glu
				325						330					335
Leu	Thr	Ala	Glu	Glu	Trp	Lys	Lys	Tyr	Glu	Lys	Glu	Lys	Glu	Lys	
				340				345							350
Asn	Lys	Thr	Leu	Lys	Asn	Val	Ile	Gln	His	Leu	Glu	Met	Glu	Leu	Asn
				355				360							365
Arg	Trp	Arg	Asn	Gly	Glu	Ala	Val	Pro	Glu	Asp	Glu	Gln	Ile	Ser	Ala
				370				375							380
Lys	Asp	Gln	Lys	Asn	Leu	Glu	Pro	Cys	Asp	Asn	Thr	Pro	Ile	Ile	Asp
				385				390			395				400
Asn	Ile	Ala	Pro	Val	Val	Ala	Gly	Ile	Ser	Thr	Glu	Glu	Lys	Glu	Lys
										405	410				415
Tyr	Asp	Glu	Glu	Ile	Ser	Ser	Leu	Tyr	Arg	Gln	Leu	Asp	Asp	Lys	Asp
				420				425							430
Asp	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Leu	Ala	Glu	Lys	Leu	Lys	Gln	Gln
				435				440							445
Met	Leu	Asp	Gln	Asp	Glu	Leu	Leu	Ala	Ser	Thr	Arg	Arg	Asp	Tyr	Glu
				450				455							460
Lys	Ile	Gln	Glu	Glu	Leu	Thr	Arg	Leu	Gln	Ile	Glu	Asn	Glu	Ala	Ala
				465				470			475				480
Lys	Asp	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu	Glu	Leu	Ala	Val
								485			490				495
Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Asp	Lys	Thr	Arg	Ala	Asn
				500				505							510
Glu	Gln	Leu	Thr	Asp	Glu	Leu	Ala	Gln	Lys	Thr	Thr	Thr	Leu	Thr	Thr
				515				520							525
Thr	Gln	Arg	Glu	Leu	Ser	Gln	Leu	Gln	Glu	Leu	Ser	Asn	His	Gln	Lys
				530				535							540
Lys	Arg	Ala	Thr	Glu	Ile	Leu	Asn	Leu	Leu	Leu	Lys	Asp	Leu	Gly	Glu
				545				550			555				560
Ile	Gly	Gly	Ile	Ile	Gly	Thr	Asn	Asp	Val	Lys	Thr	Leu	Ala	Asp	Val
								565			570				575
Asn	Gly	Val	Ile	Glu	Glu	Glu	Phe	Thr	Met	Ala	Arg	Leu	Tyr	Ile	Ser
				580				585							590
Lys	Met	Lys	Ser	Glu	Val	Lys	Ser	Leu	Val	Asn	Arg	Ser	Lys	Gln	Leu
				595				600							605
Glu	Ser	Ala	Gln	Met	Asp	Ser	Asn	Arg	Lys	Met	Asn	Ala	Ser	Glu	Arg
				610				615							620
Glu	Leu	Ala	Ala	Cys	Gln	Leu	Leu	Ile	Ser	Gln	His	Glu	Ala	Lys	Ile
				625				630			635				640
Lys	Ser	Leu	Thr	Asp	Tyr	Met	Gln	Asn	Met	Glu	Gln	Lys	Arg	Arg	Gln
								645			650				655
Leu	Glu	Glu	Ser	Gln	Asp	Ser	Leu	Ser	Glu	Glu	Leu	Ala	Lys	Leu	Arg
								660			665				670
Ala	Gln	Glu	Lys	Met	His	Glu	Val	Ser	Phe	Gln	Asp	Lys	Glu	Lys	Glu
				675				680							685
His	Leu	Thr	Arg	Leu	Gln	Asp	Ala	Glu	Glu	Met	Lys	Lys	Ala	Leu	Glu
				690				695							700
Gln	Gln	Met	Glu	Ser	His	Arg	Glu	Ala	His	Gln	Lys	Gln	Leu	Ser	Arg
								705			710				720
Leu	Arg	Asp	Glu	Ile	Glu	Glu	Lys	Gln	Lys	Ile	Ile	Asp	Glu	Ile	Arg
								725			730				735
Asp	Leu	Asn	Gln	Lys	Leu	Gln	Leu	Glu	Gln	Glu	Lys	Leu	Ser	Ser	Asp
								740			745				750
Tyr	Asn	Lys	Leu	Lys	Ile	Glu	Asp	Gln	Glu	Arg	Glu	Met	Lys	Leu	Glu
				755				760							765
Lys	Leu	Leu	Leu	Leu	Asn	Asp	Lys	Arg	Glu	Gln	Ala	Arg	Glu	Asp	Leu
				770				775							780

Lys	Gly	Leu	Glu	Glu	Thr	Val	Ser	Arg	Glu	Leu	Gln	Thr	Leu	His	Asn
785															800
Leu	Arg	Lys	Leu	Phe	Val	Gln	Asp	Leu	Thr	Thr	Arg	Val	Lys	Lys	Ser
															815
Val	Glu	Leu	Asp	Asn	Asp	Asp	Gly	Gly	Gly	Ser	Ala	Ala	Gln	Lys	Gln
															830
															820
Lys	Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His
															845
															835
Lys	Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys
															850
Leu	Glu	Lys	Arg	Leu	Arg	Ala	Thr	Ala	Glu	Arg	Val	Lys	Ala	Leu	Glu
															865
Ser	Ala	Leu	Lys	Glu	Ala	Lys	Glu	Asn	Ala	Met	Arg	Asp	Arg	Lys	Arg
															885
Tyr	Gln	Gln	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Ala	Lys	Asn
															900
Met	Ala	Arg	Arg	Ala	His	Ser	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro
															915
Gly	His	Tyr	Pro	Ala	Ser	Ser	Pro	Thr	Ala	Val	His	Ala	Ile	Arg	Gly
															930
Gly	Gly	Ser	Ser	Ser	Ser	Asn	Ser	Thr	His	Tyr	Gln	Lys			
															945
															950
															955

<210> 17  
<211> 956  
<212> PRT  
<213> Mus musculus

<400> 17															
Met	Ala	Asp	Pro	Ala	Glu	Cys	Ser	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg
1															15
Pro	Leu	Asn	Glu	Ala	Glu	Ile	Leu	Arg	Gly	Asp	Lys	Phe	Ile	Pro	Lys
															30
Phe	Lys	Gly	Glu	Glu	Thr	Val	Val	Ile	Gly	Gln	Gly	Lys	Pro	Tyr	Val
															45
Phe	Asp	Arg	Val	Leu	Pro	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val	Tyr	Asn
															50
Ala	Cys	Ala	Lys	Gln	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly
															65
Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met
															85
Glu	Gly	Lys	Leu	His	Asp	Pro	Gln	Leu	Met	Gly	Ile	Ile	Pro	Arg	Ile
															100
Ala	His	Asp	Ile	Phe	Asp	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu
															115
Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg
															130
Asp	Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ala	Val	His	Glu	Asp	Lys
															145
Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser
															165
Pro	Glu	Glu	Val	Met	Asp	Val	Ile	Asp	Glu	Gly	Lys	Ala	Asn	Arg	His
															180
Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile
															195
Phe	Leu	Ile	Asn	Ile	Lys	Gln	Glu	Asn	Val	Glu	Thr	Glu	Lys	Lys	Leu
															210
Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser
															225
Lys	Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn
															245
Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly

260	265	270
Thr Lys Thr His Val Pro Tyr Arg Asp Ser Lys Met Thr Arg Ile Leu		
275	280	285
Gln Asp Ser Leu Gly Gly Asn Cys Arg Thr Thr Ile Val Ile Cys Cys		
290	295	300
Ser Pro Ser Val Phe Asn Glu Ala Glu Thr Lys Ser Thr Leu Met Phe		
305	310	315
Gly Gln Arg Ala Lys Thr Ile Lys Asn Thr Val Ser Val Asn Leu Glu		
325	330	335
Leu Thr Ala Glu Glu Trp Lys Lys Tyr Glu Lys Glu Lys Glu Lys		
340	345	350
Asn Lys Ala Leu Lys Ser Val Leu Gln His Leu Glu Met Glu Leu Asn		
355	360	365
Arg Trp Arg Asn Gly Glu Ala Val Pro Glu Asp Glu Gln Ile Ser Ala		
370	375	380
Lys Asp His Lys Ser Leu Glu Pro Cys Asp Asn Thr Pro Ile Ile Asp		
385	390	395
400		
Asn Ile Thr Pro Val Val Asp Gly Ile Ser Ala Glu Lys Glu Lys Tyr		
405	410	415
Asp Glu Glu Ile Thr Ser Leu Tyr Arg Gln Leu Asp Asp Lys Asp Asp		
420	425	430
Glu Ile Asn Gln Gln Ser Gln Leu Ala Glu Lys Leu Lys Gln Gln Met		
435	440	445
Leu Asp Gln Asp Glu Leu Leu Ala Ser Thr Arg Arg Asp Tyr Glu Lys		
450	455	460
Ile Gln Glu Glu Leu Thr Arg Leu Gln Ile Glu Asn Glu Ala Ala Lys		
465	470	475
480		
Asp Glu Val Lys Glu Val Leu Gln Ala Leu Glu Glu Leu Ala Val Asn		
485	490	495
Tyr Asp Gln Lys Ser Gln Glu Val Glu Asp Lys Thr Arg Ala Asn Glu		
500	505	510
Gln Leu Thr Asp Glu Leu Ala Gln Lys Thr Thr Thr Leu Thr Thr Thr		
515	520	525
Gln Arg Glu Leu Ser Gln Leu Gln Glu Leu Ser Asn His Gln Lys Lys		
530	535	540
Arg Ala Thr Glu Ile Leu Asn Leu Leu Lys Asp Leu Gly Glu Ile		
545	550	555
560		
Gly Gly Ile Ile Gly Thr Asn Asp Val Lys Thr Leu Ala Asp Val Asn		
565	570	575
Gly Val Ile Glu Glu Glu Phe Thr Met Ala Arg Leu Tyr Ile Ser Lys		
580	585	590
Met Lys Ser Glu Val Lys Ser Leu Val Asn Arg Ser Lys Gln Leu Glu		
595	600	605
Ser Ala Gln Met Asp Ser Asn Arg Lys Met Asn Ala Ser Glu Arg Glu		
610	615	620
Leu Ala Ala Cys Gln Leu Leu Ile Ser Gln His Glu Ala Lys Ile Lys		
625	630	635
640		
Ser Leu Thr Asp Tyr Met Gln Asn Met Glu Gln Lys Arg Arg Gln Leu		
645	650	655
Glu Glu Ser Gln Asp Ser Leu Ser Glu Glu Leu Ala Lys Leu Arg Ala		
660	665	670
Gln Glu Lys Met His Glu Val Ser Phe Gln Asp Lys Glu Lys Glu His		
675	680	685
Leu Thr Arg Leu Gln Asp Ala Glu Glu Val Lys Lys Ala Leu Glu Gln		
690	695	700
Gln Met Glu Ser His Arg Glu Ala His Gln Lys Gln Leu Ser Arg Leu		
705	710	715
720		
Arg Asp Glu Ile Glu Glu Lys Gln Arg Ile Ile Asp Glu Ile Arg Asp		
725	730	735
Leu Asn Gln Lys Leu Gln Leu Glu Gln Glu Arg Leu Ser Ser Asp Tyr		
740	745	750
Asn Lys Leu Lys Ile Glu Asp Gln Glu Arg Glu Val Lys Leu Glu Lys		
755	760	765

Leu	Leu	Leu	Leu	Asn	Asp	Lys	Arg	Glu	Gln	Ala	Arg	Glu	Asp	Leu	Lys
770						775					780				
Gly	Leu	Glu	Glu	Thr	Val	Ser	Ile	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu
785						790				795					800
Arg	Lys	Leu	Phe	Val	Gln	Asp	Leu	Thr	Thr	Arg	Val	Lys	Lys	Ser	Val
					805				810					815	
Glu	Leu	Asp	Ser	Asp	Asp	Gly	Gly	Gly	Ser	Ala	Ala	Gln	Lys	Gln	Lys
					820			825				830			
Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys
					835			840			845				
Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu
					850			855			860				
Glu	Lys	Arg	Leu	Arg	Ala	Thr	Ala	Glu	Arg	Val	Lys	Ala	Leu	Glu	Ser
					865			870			875				880
Ala	Leu	Lys	Glu	Ala	Lys	Glu	Asn	Ala	Met	Arg	Asp	Arg	Lys	Arg	Tyr
					885			890			895				
Gln	Gln	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Ala	Lys	Asn	Met
					900			905			910				
Ala	Arg	Arg	Ala	His	Ser	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro	Gly
					915			920			925				
His	Tyr	Pro	Ala	Ser	Ser	Pro	Thr	Ala	Val	His	Ala	Val	Arg	Gly	Gly
					930			935			940				
Gly	Gly	Gly	Ser	Ser	Asn	Ser	Thr	His	Tyr	Gln	Lys				
					945			950			955				

<210> 18

<211> 815

<212> PRT

<213> *Caenorhabditis elegans*

<400> 18

Met	Glu	Pro	Arg	Thr	Asp	Gly	Ala	Glu	Cys	Gly	Val	Gln	Val	Phe	Cys
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Arg	Ile	Arg	Pro	Leu	Asn	Lys	Thr	Glu	Glu	Lys	Asn	Ala	Asp	Arg	Phe
						20			25					30	
Leu	Pro	Lys	Phe	Pro	Ser	Glu	Asp	Ser	Ile	Ser	Leu	Gly	Gly	Lys	Val
						35			40			45			
Tyr	Val	Phe	Asp	Lys	Val	Phe	Lys	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val
						50			55			60			
Tyr	Lys	Gly	Ala	Ala	Tyr	His	Ile	Val	Gln	Asp	Val	Leu	Ser	Gly	Tyr
						65			70			75			80
Asn	Gly	Thr	Val	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His
						85			90			95			
Thr	Met	Glu	Gly	Val	Ile	Gly	Asp	Asn	Gly	Leu	Ser	Gly	Ile	Ile	Pro
						100			105			110			
Arg	Ile	Val	Ala	Asp	Ile	Phe	Asn	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn
						115			120			125			
Leu	Gln	Phe	His	Ile	Lys	Val	Ser	Tyr	Tyr	Glu	Ile	Tyr	Asn	Glu	Lys
						130			135			140			
Ile	Arg	Asp	Leu	Leu	Asp	Pro	Glu	Lys	Val	Asn	Leu	Ser	Ile	His	Glu
						145			150			155			160
Asp	Lys	Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Ala	Thr	Glu	Arg	Phe	Val
						165			170			175			
Gly	Gly	Pro	Asp	Glu	Val	Leu	Gln	Ala	Ile	Glu	Asp	Gly	Lys	Ser	Asn
						180			185			190			
Arg	Met	Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His
						195			200			205			
Ser	Val	Phe	Leu	Ile	Thr	Val	Lys	Gln	Glu	His	Gln	Thr	Thr	Lys	Lys
						210			215			220			
Gln	Leu	Thr	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys
						225			230			235			240
Val	Ser	Lys	Thr	Gly	Ala	Gln	Gly	Thr	Val	Leu	Glu	Glu	Ala	Lys	Asn

	245	250	255												
Ile	Asn	Lys	Ser	Leu	Thr	Ala	Leu	Gly	Ile	Val	Ile	Ser	Ala	Leu	Ala
				260				265						270	
Glu	Gly	Thr	Lys	Ser	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Leu	Thr	Arg
				275			280					285			
Ile	Leu	Gln	Glu	Ser	Leu	Gly	Gly	Asn	Ser	Arg	Thr	Thr	Val	Ile	Ile
				290			295				300				
Cys	Ala	Ser	Pro	Ser	His	Phe	Asn	Glu	Ala	Glu	Thr	Lys	Ser	Thr	Leu
						310			315				320		
Leu	Phe	Gly	Ala	Arg	Ala	Lys	Thr	Ile	Lys	Asn	Val	Val	Gln	Ile	Asn
						325			330				335		
Glu	Glu	Leu	Thr	Ala	Glu	Glu	Trp	Lys	Arg	Arg	Tyr	Glu	Lys	Glu	Lys
						340		345				350			
Glu	Lys	Asn	Thr	Arg	Leu	Ala	Ala	Leu	Leu	Gln	Ala	Ala	Leu	Glu	
						355		360			365				
Leu	Ser	Arg	Trp	Arg	Ala	Gly	Glu	Ser	Val	Ser	Glu	Val	Glu	Trp	Val
						370		375			380				
Asn	Leu	Ser	Asp	Ser	Ala	Gln	Met	Ala	Val	Ser	Glu	Val	Ser	Gly	Gly
						385		390		395			400		
Ser	Thr	Pro	Leu	Met	Glu	Arg	Ser	Ile	Ala	Pro	Ala	Pro	Pro	Met	Leu
						405			410			415			
Thr	Ser	Thr	Thr	Gly	Pro	Ile	Thr	Asp	Glu	Glu	Lys	Lys	Lys	Tyr	Glu
						420			425			430			
Glu	Glu	Arg	Val	Lys	Leu	Tyr	Gln	Gln	Leu	Asp	Glu	Lys	Asp	Asp	Glu
						435		440			445				
Ile	Gln	Lys	Val	Ser	Gln	Glu	Leu	Glu	Lys	Leu	Arg	Gln	Gln	Val	Leu
						450		455			460				
Leu	Gln	Glu	Glu	Ala	Leu	Gly	Thr	Met	Arg	Glu	Asn	Glu	Glu	Leu	Ile
						465		470		475			480		
Arg	Glu	Glu	Asn	Asn	Arg	Phe	Gln	Lys	Glu	Ala	Glu	Asp	Lys	Gln	Gln
						485			490			495			
Glu	Gly	Lys	Glu	Met	Met	Thr	Ala	Leu	Glu	Ile	Ala	Val	Asn	Leu	
						500			505			510			
Asp	Val	Arg	Gln	Ala	Glu	Cys	Glu	Lys	Leu	Lys	Arg	Glu	Leu	Glu	Val
						515		520			525				
Val	Gln	Glu	Asp	Asn	Gln	Ser	Leu	Glu	Asp	Arg	Met	Asn	Gln	Ala	Thr
						530		535			540				
Ser	Leu	Leu	Asn	Ala	His	Leu	Asp	Glu	Cys	Gly	Pro	Lys	Ile	Arg	His
						545		550		555			560		
Phe	Lys	Glu	Gly	Ile	Tyr	Asn	Val	Ile	Arg	Glu	Phe	Asn	Ile	Ala	Asp
						565			570			575			
Ile	Ala	Ser	Gln	Asn	Asp	Gln	Leu	Pro	Asp	His	Asp	Leu	Asn	His	
						580			585			590			
Val	Arg	Ile	Gly	Val	Ser	Lys	Leu	Phe	Ser	Glu	Tyr	Ser	Ala	Ala	Lys
						595		600			605				
Glu	Ser	Ser	Thr	Ala	Ala	Glu	His	Asp	Ala	Glu	Ala	Lys	Leu	Ala	Ala
						610		615			620				
Asp	Val	Ala	Arg	Val	Glu	Ser	Gly	Gln	Asp	Ala	Gly	Arg	Met	Lys	Gln
						625		630			635			640	
Leu	Leu	Val	Lys	Asp	Gln	Ala	Ala	Lys	Glu	Ile	Lys	Pro	Leu	Thr	Asp
						645			650			655			
Arg	Val	Asn	Met	Glu	Leu	Thr	Thr	Leu	Lys	Asn	Leu	Lys	Lys	Glu	Phe
						660			665			670			
Met	Arg	Val	Leu	Val	Ala	Arg	Cys	Gln	Ala	Asn	Gln	Asp	Thr	Glu	Gly
						675		680			685				
Glu	Asp	Ser	Leu	Ser	Gly	Pro	Ala	Gln	Lys	Gln	Arg	Ile	Gln	Phe	Leu
						690		695			700				
Glu	Asn	Asn	Leu	Asp	Lys	Leu	Thr	Lys	Val	His	Lys	Gln	Leu	Val	Arg
						705		710		715			720		
Asp	Asn	Ala	Asp	Leu	Arg	Val	Glu	Leu	Pro	Lys	Met	Glu	Ala	Arg	Leu
						725			730			735			
Arg	Gly	Arg	Glu	Asp	Arg	Ile	Lys	Ile	Leu	Glu	Thr	Ala	Leu	Arg	Asp
						740			745			750			

Ser	Lys	Gln	Arg	Ser	Gln	Ala	Glu	Arg	Lys	Lys	Tyr	Gln	Gln	Glu	Val
755							760					765			
Glu	Arg	Ile	Lys	Glu	Ala	Val	Arg	Gln	Arg	Asn	Met	Arg	Arg	Met	Asn
770						775					780				
Ala	Pro	Gln	Ile	Val	Lys	Pro	Ile	Arg	Pro	Gly	Gln	Val	Tyr	Thr	Ser
785					790				795				800		
Pro	Ser	Ala	Gly	Met	Ser	Gln	Gly	Ala	Pro	Asn	Gly	Ser	Asn	Ala	
				805					810				815		

<210> 19

<211> 975

<212> PRT

<213> Drosophila melanogaster

<400> 19

Met	Ser	Ala	Glu	Arg	Glu	Ile	Pro	Ala	Glu	Asp	Ser	Ile	Lys	Val	Val
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Cys	Arg	Phe	Arg	Pro	Leu	Asn	Asp	Ser	Glu	Glu	Lys	Ala	Gly	Ser	Lys
			20					25				30			
Phe	Val	Val	Lys	Phe	Pro	Asn	Asn	Val	Glu	Glu	Asn	Cys	Ile	Ser	Ile
			35					40				45			
Ala	Gly	Lys	Val	Tyr	Leu	Phe	Asp	Lys	Val	Phe	Lys	Pro	Asn	Ala	Ser
			50					55			60				
Gln	Glu	Lys	Val	Tyr	Asn	Glu	Ala	Ala	Lys	Ser	Ile	Val	Thr	Asp	Val
65					70				75				80		
Leu	Ala	Gly	Tyr	Asn	Gly	Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser
			85				90					95			
Gly	Lys	Thr	His	Thr	Met	Glu	Gly	Val	Ile	Gly	Asp	Ser	Val	Lys	Gln
			100			105			110						
Gly	Ile	Ile	Pro	Arg	Ile	Val	Asn	Asp	Ile	Phe	Asn	His	Ile	Tyr	Ala
			115			120			125						
Met	Glu	Val	Asn	Leu	Glu	Phe	His	Ile	Lys	Val	Ser	Tyr	Tyr	Glu	Ile
	130			135				140							
Tyr	Met	Asp	Lys	Ile	Arg	Asp	Leu	Leu	Asp	Val	Ser	Lys	Val	Asn	Leu
145				150				155					160		
Ser	Val	His	Glu	Asp	Lys	Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Ala	Thr
			165				170					175			
Glu	Arg	Phe	Val	Ser	Ser	Pro	Glu	Asp	Val	Phe	Glu	Val	Ile	Glu	Glu
			180			185			190						
Gly	Lys	Ser	Asn	Arg	His	Ile	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser
			195			200			205						
Ser	Arg	Ser	His	Ser	Val	Phe	Leu	Ile	Asn	Val	Lys	Gln	Glu	Asn	Leu
	210			215			220								
Glu	Asn	Gln	Lys	Lys	Leu	Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala
225				230			235					240			
Gly	Ser	Glu	Lys	Val	Ser	Lys	Thr	Gly	Ala	Glu	Gly	Thr	Val	Leu	Asp
			245			250			255						
Glu	Ala	Lys	Asn	Ile	Asn	Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile
			260			265			270						
Ser	Ala	Leu	Ala	Asp	Gly	Asn	Lys	Thr	His	Ile	Pro	Tyr	Arg	Asp	Ser
			275			280			285						
Lys	Leu	Thr	Arg	Ile	Leu	Gln	Glu	Ser	Leu	Gly	Gly	Asn	Ala	Arg	Thr
			290			295			300						
Thr	Ile	Val	Ile	Cys	Cys	Ser	Pro	Ala	Ser	Phe	Asn	Glu	Ser	Glu	Thr
305				310				315					320		
Lys	Ser	Thr	Leu	Asp	Phe	Gly	Arg	Arg	Ala	Lys	Thr	Val	Lys	Asn	Val
				325			330			335					
Val	Cys	Val	Asn	Glu	Glu	Leu	Thr	Ala	Glu	Glu	Trp	Lys	Arg	Arg	Tyr
			340			345			350						
Glu	Lys	Glu	Lys	Asn	Ala	Arg	Leu	Lys	Gly	Lys	Val	Glu	Lys		
			355			360			365						
Leu	Glu	Ile	Glu	Leu	Ala	Arg	Trp	Ala	Gly	Glu	Thr	Val	Lys	Ala	

370	375	380													
Glu	Glu	Gln	Ile	Asn	Met	Glu	Asp	Leu	Met	Glu	Ala	Ser	Thr	Pro	Asn
385						390				395					400
Leu	Glu	Val	Glu	Ala	Ala	Gln	Thr	Ala	Ala	Glu	Ala	Ala	Leu	Ala	
						405				410					415
Ala	Gln	Arg	Thr	Ala	Leu	Ala	Asn	Met	Ser	Ala	Ser	Val	Ala	Val	Asn
						420				425					430
Glu	Gln	Ala	Arg	Leu	Ala	Thr	Glu	Cys	Glu	Arg	Leu	Tyr	Gln	Gln	Leu
						435				440					445
Asp	Asp	Lys	Asp	Glu	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Tyr	Ala	Glu	Gln
						450				455					460
Leu	Lys	Glu	Gln	Val	Met	Glu	Gln	Glu	Glu	Leu	Ile	Ala	Asn	Ala	Arg
						465				470					480
Arg	Glu	Tyr	Glu	Thr	Leu	Gln	Ser	Glu	Met	Ala	Arg	Ile	Gln	Gln	Glu
						485				490					495
Asn	Glu	Ser	Ala	Lys	Glu	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu
						500				505					510
Glu	Leu	Ala	Val	Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Ile	Asp	Asn	Lys
						515				520					525
Asn	Lys	Asp	Ile	Asp	Ala	Leu	Asn	Glu	Glu	Leu	Gln	Gln	Lys	Gln	Ser
						530				535					540
Val	Phe	Asn	Ala	Ala	Ser	Thr	Glu	Leu	Gln	Gln	Leu	Lys	Asp	Met	Ser
						545				550					560
Ser	His	Gln	Lys	Lys	Arg	Ile	Thr	Glu	Met	Leu	Thr	Asn	Leu	Leu	Arg
						565				570					575
Asp	Leu	Gly	Glu	Val	Gly	Gln	Ala	Ile	Ala	Pro	Gly	Glu	Ser	Ser	Ile
						580				585					590
Asp	Leu	Lys	Met	Ser	Ala	Leu	Ala	Gly	Thr	Asp	Ala	Ser	Lys	Val	Glu
						595				600					605
Glu	Asp	Phe	Thr	Met	Ala	Arg	Leu	Phe	Ile	Ser	Lys	Met	Lys	Thr	Glu
						610				615					620
Ala	Lys	Asn	Ile	Ala	Gln	Arg	Cys	Ser	Asn	Met	Glu	Thr	Gln	Gln	Ala
						625				630					640
Asp	Ser	Asn	Lys	Lys	Ile	Ser	Glu	Tyr	Glu	Lys	Asp	Leu	Gly	Glu	Tyr
						645				650					655
Arg	Leu	Leu	Ile	Ser	Gln	His	Glu	Ala	Arg	Met	Lys	Ser	Leu	Gln	Glu
						660				665					670
Ser	Met	Arg	Glu	Ala	Glu	Asn	Lys	Lys	Arg	Thr	Leu	Glu	Gln	Ile	
						675				680					685
Asp	Ser	Leu	Arg	Glu	Glu	Cys	Ala	Lys	Leu	Lys	Ala	Ala	Glu	His	Val
						690				695					700
Ser	Ala	Val	Asn	Ala	Glu	Glu	Lys	Gln	Arg	Ala	Glu	Glu	Leu	Arg	Ser
						705				710					720
Met	Phe	Asp	Ser	Gln	Met	Asp	Glu	Leu	Arg	Glu	Ala	His	Thr	Arg	Gln
						725				730					735
Val	Ser	Glu	Leu	Arg	Asp	Glu	Ile	Ala	Ala	Lys	Gln	His	Glu	Met	Asp
						740				745					750
Glu	Met	Lys	Asp	Val	His	Gln	Lys	Leu	Leu	Ala	His	Gln	Gln	Met	
						755				760					765
Thr	Ala	Asp	Tyr	Glu	Lys	Val	Arg	Gln	Glu	Asp	Ala	Glu	Lys	Ser	Ser
						770				775					780
Glu	Leu	Gln	Asn	Ile	Ile	Leu	Thr	Asn	Glu	Arg	Arg	Glu	Gln	Ala	Arg
						785				790					800
Lys	Asp	Leu	Lys	Gly	Leu	Glu	Asp	Thr	Val	Ala	Lys	Glu	Leu	Gln	Thr
						805				810					815
Leu	His	Asn	Leu	Arg	Lys	Leu	Phe	Val	Gln	Asp	Leu	Gln	Gln	Arg	Ile
						820				825					830
Arg	Lys	Asn	Val	Val	Asn	Glu	Glu	Ser	Glu	Glu	Asp	Gly	Gly	Ser	Leu
						835				840					845
Ala	Gln	Lys	Gln	Lys	Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Asp	Gln	Leu
						850				855					860
Thr	Lys	Val	His	Lys	Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys
						865				870					880

Glu	Leu	Pro	Lys	Leu	Glu	Lys	Arg	Leu	Arg	Cys	Thr	Met	Glu	Arg	Val
				885					890				895		
Lys	Ala	Leu	Glu	Thr	Ala	Leu	Lys	Glu	Ala	Lys	Glu	Gly	Ala	Met	Arg
				900				905					910		
Asp	Arg	Lys	Arg	Tyr	Gln	Tyr	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val
				915			920				925				
Arg	Gln	Lys	His	Leu	Gly	Arg	Arg	Gly	Pro	Gln	Ala	Gln	Ile	Ala	Lys
				930		935				940					
Pro	Ile	Arg	Ser	Gly	Gln	Gly	Ala	Ile	Ala	Ile	Arg	Gly	Gly	Gly	Ala
				945		950			955				960		
Val	Gly	Gly	Pro	Ser	Pro	Leu	Ala	Gln	Val	Asn	Pro	Val	Asn	Ser	
				965				970				975			

<210> 20  
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 <212> PRT  
 <213> Homo sapiens

<400> 20															
Met	Ala	Asp	Leu	Ala	Glu	Cys	Asn	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg
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Pro	Leu	Asn	Glu	Ser	Glu	Val	Asn	Arg	Gly	Asp	Lys	Tyr	Ile	Ala	Lys
				20				25				30			
Phe	Gln	Gly	Glu	Asp	Thr	Val	Val	Ile	Ala	Ser	Lys	Pro	Tyr	Ala	Phe
				35			40				45				
Asp	Arg	Val	Phe	Gln	Ser	Ser	Thr	Ser	Gln	Glu	Gln	Val	Tyr	Asn	Asp
				50			55			60					
Cys	Ala	Lys	Lys	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly	Thr
				65		70			75			80			
Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met	Glu
				85			90				95				
Gly	Lys	Leu	His	Asp	Pro	Glu	Gly	Met	Gly	Ile	Ile	Pro	Arg	Ile	Val
				100			105				110				
Gln	Asp	Ile	Phe	Asn	Tyr	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu	Phe
				115			120				125				
His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg	Asp
				130			135			140					
Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys	Asn
				145			150			155			160		
Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Cys	Ser	Pro
				165				170			175				
Asp	Glu	Val	Met	Asp	Thr	Ile	Asp	Glu	Gly	Lys	Ser	Asn	Arg	His	Val
				180			185			190					
Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile	Phe
				195			200			205					
Leu	Ile	Asn	Val	Lys	Gln	Glu	Asn	Thr	Gln	Thr	Glu	Gln	Lys	Leu	Ser
				210			215			220					
Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser	Lys
				225			230			235			240		
Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn	Lys
				245				250			255				
Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly	Ser
				260			265			270					
Thr	Tyr	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu	Gln	Asp
				275			280			285					
Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Ile	Val	Ile	Cys	Cys	Ser	Pro
				290			295			300					
Ser	Ser	Tyr	Asn	Glu	Ser	Glu	Thr	Lys	Ser	Thr	Leu	Leu	Phe	Gly	Gln
				305			310			315			320		
Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Val	Cys	Val	Asn	Val	Glu	Leu	Thr
				325				330			335				
Ala	Glu	Gln	Trp	Lys	Lys	Tyr	Glu	Lys	Glu	Lys	Glu	Lys	Asn	Lys	

340	345	350
Ile Leu Arg Asn Thr Ile Gln Trp	Leu Glu Asn Glu	Leu Asn Arg Trp
355	360	365
Arg Asn Gly Glu Thr Val Pro	Ile Asp Glu Gln	Phe Asp Lys Glu Lys
370	375	380
Ala Asn Leu Glu Ala Phe Thr Val Asp Lys	Asp Ile Thr Leu Thr Asn	
385	390	395
Asp Lys Pro Ala Thr Ala Ile Gly Val	Ile Gly Asn Phe Thr Asp Ala	
405	410	415
Glu Arg Arg Lys Cys Glu Glu Ile Ala Lys	Leu Tyr Lys Gln Leu	
420	425	430
Asp Asp Lys Asp Glu Glu Ile Asn Gln Gln	Ser Gln Leu Val Glu Lys	
435	440	445
Leu Lys Thr Gln Met Leu Asp Gln Glu	Leu Glu Leu Leu Ala Ser Thr Arg	
450	455	460
Arg Asp Gln Asp Asn Met Gln Ala Glu	Leu Asn Arg Leu Gln Ala Glu	
465	470	475
Asn Asp Ala Ser Lys Glu Glu Val Lys	Glu Val Leu Gln Ala Leu Glu	
485	490	495
Glu Leu Ala Val Asn Tyr Asp Gln Lys	Ser Gln Glu Val Glu Asp Lys	
500	505	510
Thr Lys Glu Tyr Glu Leu Leu Ser Asp	Glu Leu Asn Gln Lys Ser Ala	
515	520	525
Thr Leu Ala Ser Ile Asp Ala Glu	Leu Gln Lys Leu Lys Glu Met Thr	
530	535	540
Asn His Gln Lys Lys Arg Ala Ala Glu	Met Met Ala Ser Leu Leu Lys	
545	550	555
Asp Leu Ala Glu Ile Gly Ile Ala Val	Gly Asn Asn Asp Val Lys Gln	
565	570	575
Pro Glu Gly Thr Gly Met Ile Asp Glu	Glu Phe Thr Val Ala Arg Leu	
580	585	590
Tyr Ile Ser Lys Met Lys Ser Glu	Val Lys Thr Met Val Lys Arg Cys	
595	600	605
Lys Gln Leu Glu Ser Thr Gln Thr Glu	Ser Asn Lys Lys Met Glu Glu	
610	615	620
Asn Glu Lys Glu Leu Ala Ala Cys Gln	Leu Arg Ile Ser Gln His Glu	
625	630	635
Ala Lys Ile Lys Ser Leu Thr Glu	Tyr Leu Gln Asn Val Glu Gln Lys	
645	650	655
Lys Arg Gln Leu Glu Glu Ser Val	Asp Ala Leu Ser Glu Glu Leu Val	
660	665	670
Gln Leu Arg Ala Gln Glu Lys	Val His Glu Met Glu Lys Glu His Leu	
675	680	685
Asn Lys Val Gln Thr Ala Asn Glu	Val Lys Gln Ala Val Glu Gln Gln	
690	695	700
Ile Gln Ser His Arg Glu Thr His Gln	Lys Gln Ile Ser Ser Leu Arg	
705	710	715
Asp Glu Val Glu Ala Lys Ala Lys	Leu Ile Thr Asp Leu Gln Asp Gln	
725	730	735
Asn Gln Lys Met Met Leu Glu Gln	Glu Arg Leu Arg Val Glu His Glu	
740	745	750
Lys Leu Lys Ala Thr Asp Gln Glu	Lys Ser Arg Lys Leu His Glu Leu	
755	760	765
Thr Val Met Gln Asp Arg Arg	Glu Gln Ala Arg Gln Asp Leu Lys Gly	
770	775	780
Leu Glu Glu Thr Val Ala Lys Glu	Leu Gln Thr Leu His Asn Leu Arg	
785	790	795
Lys Leu Phe Val Gln Asp Leu Ala Thr	Arg Val Lys Lys Ser Ala Glu	
805	810	815
Ile Asp Ser Asp Asp Thr Gly Gly	Ser Ala Ala Gln Lys Gln Lys Ile	
820	825	830
Ser Phe Leu Glu Asn Asn Leu Glu	Gln Leu Thr Lys Val His Lys Gln	
835	840	845

Leu Val Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu Glu  
 850 855 860  
 Lys Arg Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu Ser Ala  
 865 870 875 880  
 Leu Lys Glu Ala Lys Glu Asn Ala Ser Arg Asp Arg Lys Arg Tyr Gln  
 885 890 895  
 Gln Glu Val Asp Arg Ile Lys Glu Ala Val Arg Ser Lys Asn Met Ala  
 900 905 910  
 Arg Arg Gly His Ser Ala Gln Ile Ala Lys Pro Ile Arg Pro Gly Gln  
 915 920 925  
 His Pro Ala Ala Ser Pro Thr His Pro Ser Ala Ile Arg Gly Gly Gly  
 930 935 940  
 Ala Phe Val Gln Asn Ser Gln Pro Val Ala Val Arg Gly Gly Gly Gly  
 945 950 955 960  
 Lys Gln Val

<210> 21  
 <211> 967  
 <212> PRT  
 <213> Loligo pealeii

<400> 21  
 Met Asp Val Ala Ser Glu Cys Asn Ile Lys Val Ile Cys Arg Val Arg  
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 Pro Leu Asn Glu Ala Glu Glu Arg Ala Gly Ser Lys Phe Ile Leu Lys  
 20 25 30  
 Phe Pro Thr Asp Asp Ser Ile Ser Ile Ala Gly Lys Val Phe Val Phe  
 35 40 45  
 Asp Lys Val Leu Lys Pro Asn Val Ser Gln Glu Tyr Val Tyr Asn Val  
 50 55 60  
 Gly Ala Lys Pro Ile Val Ala Asp Val Leu Ser Gly Cys Asn Gly Thr  
 65 70 75 80  
 Ile Phe Ala Tyr Gly Gln Thr Ser Ser Gly Lys Thr His Thr Met Glu  
 85 90 95  
 Gly Val Leu Asp Lys Pro Ser Met His Gly Ile Ile Pro Arg Ile Val  
 100 105 110  
 Gln Asp Ile Phe Asn Tyr Ile Tyr Gly Met Asp Glu Asn Leu Glu Phe  
 115 120 125  
 His Ile Lys Ile Ser Tyr Tyr Glu Ile Tyr Leu Asp Lys Ile Arg Asp  
 130 135 140  
 Leu Leu Asp Val Thr Lys Thr Asn Leu Ala Val His Glu Asp Lys Asn  
 145 150 155 160  
 Arg Val Pro Phe Val Lys Gly Ala Thr Glu Arg Phe Val Ser Ser Pro  
 165 170 175  
 Glu Glu Val Met Glu Val Ile Asp Glu Gly Lys Asn Asn Arg His Val  
 180 185 190  
 Ala Val Thr Asn Met Asn Glu His Ser Ser Arg Ser His Ser Val Phe  
 195 200 205  
 Leu Ile Asn Val Lys Gln Glu Asn Val Glu Thr Gln Lys Lys Leu Ser  
 210 215 220  
 Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys Val Ser Lys  
 225 230 235 240  
 Thr Gly Ala Glu Gly Ala Val Leu Asp Glu Ala Lys Asn Ile Asn Lys  
 245 250 255  
 Ser Leu Ser Ala Leu Gly Asn Val Ile Ser Ala Leu Ala Asp Gly Asn  
 260 265 270  
 Lys Ser His Val Pro Tyr Arg Asp Ser Lys Leu Thr Arg Ile Leu Gln  
 275 280 285  
 Glu Ser Leu Gly Gly Asn Ala Arg Thr Thr Met Val Ile Cys Cys Ser  
 290 295 300  
 Pro Ala Ser Tyr Asn Glu Ser Glu Thr Lys Ser Thr Leu Leu Phe Gly

305	310	315	320												
Gln	Arg	Ala	Lys	Thr	Ile	Lys	Asn	Val	Val	Ser	Val	Asn	Glu	Glu	Leu
325	330	335													
Thr	Ala	Asp	Glu	Trp	Lys	Arg	Arg	Tyr	Glu	Lys	Glu	Lys	Glu	Arg	Val
340	345	350													
Thr	Lys	Leu	Lys	Ala	Thr	Met	Ala	Lys	Leu	Glu	Ala	Glu	Leu	Gln	Arg
355	360	365													
Trp	Arg	Thr	Gly	Gln	Ala	Val	Ser	Val	Glu	Glu	Gln	Val	Asp	Leu	Lys
370	375	380													
Glu	Asp	Val	Pro	Ala	Glu	Ser	Pro	Ala	Thr	Ser	Thr	Thr	Ser	Leu	Ala
385	390	395	400												
Gly	Gly	Leu	Ile	Ala	Ser	Met	Asn	Glu	Gly	Asp	Arg	Thr	Gln	Leu	Glu
405	410	415													
Glu	Glu	Arg	Leu	Lys	Leu	Tyr	Gln	Gln	Leu	Asp	Asp	Lys	Asp	Asp	Glu
420	425	430													
Ile	Asn	Asn	Gln	Ser	Gln	Leu	Ile	Glu	Lys	Leu	Lys	Glu	Gln	Met	Met
435	440	445													
Glu	Gln	Glu	Asp	Leu	Ile	Ala	Gln	Ser	Arg	Arg	Asp	Tyr	Glu	Asn	Leu
450	455	460													
Gln	Gln	Asp	Met	Ser	Arg	Ile	Gln	Ala	Asp	Asn	Glu	Ser	Ala	Lys	Asp
465	470	475	480												
Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu	Glu	Leu	Ala	Met	Asn	Tyr
485	490	495													
Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Asp	Lys	Asn	Lys	Glu	Asn	Glu	Asn
500	505	510													
Leu	Ser	Glu	Glu	Leu	Asn	Gln	Lys	Leu	Ser	Thr	Leu	Asn	Ser	Leu	Gln
515	520	525													
Asn	Glu	Leu	Asp	Gln	Leu	Lys	Asp	Ser	Ser	Met	His	His	Arg	Lys	Arg
530	535	540													
Val	Thr	Asp	Met	Met	Ile	Asn	Leu	Leu	Lys	Asp	Leu	Gly	Asp	Ile	Gly
545	550	555	560												
Thr	Ile	Val	Gly	Gly	Asn	Ala	Ala	Glu	Thr	Lys	Pro	Thr	Ala	Gly	Ser
565	570	575													
Gly	Glu	Lys	Ile	Glu	Glu	Glu	Phe	Thr	Val	Ala	Arg	Leu	Tyr	Ile	Ser
580	585	590													
Lys	Met	Lys	Ser	Glu	Val	Lys	Thr	Leu	Val	Ser	Arg	Asn	Asn	Gln	Leu
595	600	605													
Glu	Asn	Thr	Gln	Gln	Asp	Asn	Phe	Lys	Lys	Ile	Glu	Thr	His	Glu	Lys
610	615	620													
Asp	Leu	Ser	Asn	Cys	Lys	Leu	Ile	Gln	Gln	His	Glu	Ala	Lys	Met	
625	630	635	640												
Ala	Ser	Leu	Gln	Glu	Ala	Ile	Lys	Asp	Ser	Glu	Asn	Lys	Lys	Arg	Met
645	650	655													
Leu	Glu	Asp	Asn	Val	Asp	Ser	Leu	Asn	Glu	Glu	Tyr	Ala	Lys	Leu	Lys
660	665	670													
Ala	Gln	Glu	Gln	Met	His	Leu	Ala	Ala	Leu	Ser	Glu	Arg	Glu	Lys	Glu
675	680	685													
Thr	Ser	Gln	Ala	Ser	Glu	Thr	Arg	Glu	Val	Leu	Glu	Lys	Gln	Met	Glu
690	695	700													
Met	His	Arg	Glu	Gln	His	Gln	Lys	Gln	Leu	Gln	Ser	Leu	Arg	Asp	Glu
705	710	715	720												
Ile	Ser	Glu	Lys	Gln	Ala	Thr	Val	Asp	Asn	Leu	Lys	Asp	Asp	Asn	Gln
725	730	735													
Arg	Leu	Ser	Leu	Ala	Leu	Glu	Lys	Leu	Gln	Ala	Asp	Tyr	Asp	Lys	Leu
740	745	750													
Lys	Gln	Glu	Glu	Val	Glu	Lys	Ala	Ala	Lys	Leu	Ala	Asp	Leu	Ser	Leu
755	760	765													
Gln	Ile	Asp	Arg	Arg	Glu	Gln	Ala	Lys	Gln	Asp	Leu	Lys	Gly	Leu	Glu
770	775	780													
Glu	Thr	Val	Ala	Lys	Glu	Leu	Gln	Thr	Leu	His	Asn	Leu	Arg	Lys	Leu
785	790	795	800												
Phe	Val	Gln	Asp	Leu	Gln	Asn	Lys	Val	Lys	Lys	Ser	Cys	Ser	Lys	Thr
805	810	815													

Glu	Glu	Glu	Asp	Glu	Asp	Thr	Gly	Gly	Asn	Ala	Ala	Gln	Lys	Gln	Lys
				820			825						830		
Ile	Ser	Phe	Leu	Glu	Asn	Asn	Leu	Glu	Gln	Leu	Thr	Lys	Val	His	Lys
				835			840					845			
Gln	Leu	Val	Arg	Asp	Asn	Ala	Asp	Leu	Arg	Cys	Glu	Leu	Pro	Lys	Leu
				850			855				860				
Glu	Lys	Arg	Leu	Arg	Ala	Thr	Met	Glu	Arg	Val	Lys	Ser	Leu	Glu	Ser
				865			870			875			880		
Ala	Leu	Lys	Asp	Ala	Lys	Glu	Gly	Ala	Met	Arg	Asp	Arg	Lys	Arg	Tyr
				885			890				895				
Gln	His	Glu	Val	Asp	Arg	Ile	Lys	Glu	Ala	Val	Arg	Gln	Lys	Asn	Leu
				900			905				910				
Ala	Arg	Arg	Gly	His	Ala	Ala	Gln	Ile	Ala	Lys	Pro	Ile	Arg	Pro	Gly
				915			920				925				
Gln	His	Gln	Ser	Val	Ser	Pro	Ala	Gln	Ala	Ala	Ala	Ile	Arg	Gly	Gly
				930			935				940				
Gly	Gly	Leu	Ser	Gln	Asn	Gly	Pro	Met	Ile	Thr	Ser	Thr	Pro	Ile	Arg
				945			950			955			960		
Met	Ala	Pro	Glu	Ser	Lys	Ala									
				965											

<210> 22  
 <211> 963  
 <212> PRT  
 <213> Mus musculus

<400> 22															
Met	Ala	Asp	Pro	Ala	Glu	Cys	Asn	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg
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Pro	Leu	Asn	Glu	Ser	Glu	Val	Asn	Arg	Gly	Asp	Lys	Tyr	Val	Ala	Lys
								20	25	30					
Phe	Gln	Gly	Glu	Asp	Thr	Val	Val	Ile	Ala	Ser	Lys	Pro	Tyr	Ala	Phe
								35	40	45					
Asp	Arg	Val	Phe	Gln	Ser	Ser	Thr	Ser	Gln	Glu	Gln	Val	Tyr	Asn	Asp
								50	55	60					
Cys	Ala	Lys	Lys	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly	Thr
								65	70	75		80			
Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met	Glu
								85	90	95					
Gly	Lys	Leu	His	Asp	Pro	Glu	Gly	Met	Gly	Ile	Ile	Pro	Arg	Ile	Val
								100	105	110					
Gln	Asp	Ile	Phe	Asn	Tyr	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu	Phe
								115	120	125					
His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg	Asp
								130	135	140					
Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys	Asn
								145	150	155		160			
Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Cys	Ser	Pro
								165	170	175					
Asp	Glu	Val	Met	Asp	Thr	Ile	Asp	Glu	Gly	Lys	Ser	Asn	Arg	His	Val
								180	185	190					
Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile	Phe
								195	200	205					
Leu	Ile	Asn	Val	Lys	Gln	Glu	Asn	Thr	Gln	Thr	Glu	Gln	Lys	Leu	Ser
								210	215	220					
Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser	Lys
								225	230	235		240			
Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn	Lys
								245	250	255					
Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly	Ser
								260	265	270					
Thr	Tyr	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu	Gln	Asp

275	280	285													
Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Ile	Val	Ile	Cys	Cys	Ser	Pro
290						295					300				
Ser	Ser	Tyr	Asn	Glu	Ser	Glu	Thr	Lys	Ser	Thr	Leu	Leu	Phe	Gly	Gln
305						310					315				320
Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Val	Cys	Val	Asn	Val	Glu	Leu	Thr
									325		330				335
Ala	Glu	Gln	Trp	Lys	Lys	Tyr	Glu	Lys	Glu	Lys	Glu	Lys	Asn	Lys	
							340		345						350
Thr	Leu	Arg	Asn	Thr	Ile	Gln	Trp	Leu	Glu	Asn	Glu	Leu	Asn	Arg	Trp
							355		360						365
Arg	Asn	Gly	Glu	Thr	Val	Pro	Ile	Asp	Glu	Gln	Phe	Asp	Lys	Glu	Lys
							370		375						380
Ala	Asn	Leu	Glu	Ala	Phe	Thr	Ala	Asp	Lys	Asp	Ile	Ala	Ile	Thr	Ser
							385		390						400
Asp	Lys	Gly	Ala	Ala	Val	Gly	Met	Ala	Gly	Ser	Phe	Thr	Asp	Ala	
							405			410					415
Glu	Arg	Arg	Lys	Cys	Glu	Glu	Glu	Leu	Ala	Lys	Leu	Tyr	Lys	Gln	Leu
							420		425						430
Asp	Asp	Lys	Asp	Glu	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Leu	Val	Glu	Lys
							435		440						445
Leu	Lys	Thr	Gln	Met	Leu	Asp	Gln	Glu	Glu	Leu	Leu	Ala	Ser	Thr	Arg
							450		455						460
Arg	Asp	Gln	Asp	Asn	Met	Gln	Ala	Glu	Leu	Asn	Arg	Leu	Gln	Ala	Glu
							465		470						480
Asn	Asp	Ala	Ser	Lys	Glu	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu
							485			490					495
Glu	Leu	Ala	Val	Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Asp	Lys
							500		505						510
Thr	Lys	Glu	Tyr	Glu	Leu	Leu	Thr	Asp	Glu	Phe	Asn	Gln	Lys	Ser	Ala
							515		520						525
Thr	Leu	Ala	Ser	Ile	Asp	Ala	Glu	Leu	Gln	Lys	Leu	Lys	Glu	Met	Thr
							530		535						540
Asn	His	Gln	Lys	Lys	Arg	Ala	Ala	Glu	Met	Met	Ala	Ser	Leu	Leu	Lys
							545		550						560
Asp	Leu	Ala	Glu	Ile	Gly	Ile	Ala	Val	Gly	Asn	Asn	Asp	Val	Lys	Gln
							565			570					575
Pro	Glu	Gly	Thr	Gly	Met	Ile	Asp	Glu	Glu	Phe	Thr	Val	Ala	Arg	Leu
							580		585						590
Tyr	Ile	Ser	Lys	Met	Lys	Ser	Glu	Val	Lys	Thr	Met	Val	Lys	Arg	Cys
							595		600						605
Lys	Gln	Leu	Glu	Ser	Thr	Gln	Thr	Glu	Ser	Asn	Lys	Lys	Met	Glu	Glu
							610		615						620
Asn	Glu	Lys	Glu	Leu	Ala	Ala	Cys	Gln	Leu	Arg	Ile	Ser	Gln	His	Glu
							625		630						640
Ala	Lys	Ile	Lys	Ser	Leu	Thr	Glu	Tyr	Leu	Gln	Asn	Asp	Glu	Gln	Lys
							645			650					655
Lys	Arg	Gln	Leu	Glu	Glu	Ser	Leu	Asp	Ser	Leu	Gly	Glu	Glu	Leu	Val
							660		665						670
Gln	Leu	Arg	Ala	Gln	Glu	Lys	Val	His	Glu	Met	Glu	Lys	Glu	His	Leu
							675		680						685
Asn	Lys	Val	Gln	Thr	Ala	Asn	Glu	Val	Lys	Gln	Ala	Val	Glu	Gln	Gln
							690		695						700
Ile	Gln	Ser	His	Arg	Glu	Thr	His	Gln	Lys	Gln	Ile	Ser	Ser	Leu	Arg
							705		710						720
Asp	Glu	Val	Glu	Ala	Lys	Glu	Lys	Leu	Ile	Thr	Asp	Leu	Gln	Asp	Gln
							725			730					735
Asn	Gln	Lys	Met	Val	Leu	Glu	Thr	Glu	Arg	Leu	Arg	Val	Glu	His	Glu
							740		745						750
Arg	Leu	Lys	Ala	Thr	Asp	Gln	Glu	Lys	Ser	Arg	Lys	Leu	His	Glu	Leu
							755		760						765
Thr	Val	Met	Gln	Asp	Arg	Arg	Glu	Gln	Ala	Arg	Gln	Asp	Leu	Lys	Gly
							770		775						780

Leu Glu Glu Thr Val Ala Lys Glu Leu Gln Thr Leu His Asn Leu Arg  
 785 790 795 800  
 Lys Leu Phe Val Gln Asp Leu Ala Thr Arg Val Lys Lys Ser Ala Glu  
 805 810 815  
 Val Asp Ser Asp Asp Thr Gly Gly Ser Ala Ala Gln Lys Gln Lys Ile  
 820 825 830  
 Ser Phe Leu Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His Lys Gln  
 835 840 845  
 Leu Val Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu Glu  
 850 855 860  
 Phe Arg Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu Ser Ala  
 865 870 875 880  
 Leu Lys Glu Ala Lys Glu Asn Ala Ser Arg Asp Arg Lys Arg Tyr Gln  
 885 890 895  
 Gln Glu Val Asp Arg Ile Lys Glu Ala Val Arg Ser Lys Asn Met Ala  
 900 905 910  
 Arg Arg Gly His Ser Ala Gln Ile Ala Lys Pro Ile Arg Pro Gly Gln  
 915 920 925  
 His Pro Ala Ala Ser Pro Thr His Pro Gly Thr Val Arg Gly Gly Gly  
 930 935 940  
 Ser Phe Val Gln Asn Asn Gln Pro Val Gly Leu Arg Gly Gly Gly Gly  
 945 950 955 960  
 Lys Gln Ser

<210> 23  
 <211> 928  
 <212> PRT  
 <213> Neurospora crassa

<400> 23  
 Met Ser Ser Ser Ala Asn Ser Ile Lys Val Val Ala Arg Phe Arg Pro  
 1 5 10 15  
 Gln Asn Arg Val Glu Ile Glu Ser Gly Gly Gln Pro Ile Val Thr Phe  
 20 25 30  
 Gln Gly Pro Asp Thr Cys Thr Val Asp Ser Lys Glu Ala Gln Gly Ser  
 35 40 45  
 Phe Thr Phe Asp Arg Val Phe Asp Met Ser Cys Lys Gln Ser Asp Ile  
 50 55 60  
 Phe Asp Phe Ser Ile Lys Pro Thr Val Asp Asp Ile Leu Asn Gly Tyr  
 65 70 75 80  
 Asn Gly Thr Val Phe Ala Tyr Gly Gln Thr Gly Ala Gly Lys Ser Tyr  
 85 90 95  
 Thr Met Met Gly Thr Ser Ile Asp Asp Pro Asp Gly Arg Gly Val Ile  
 100 105 110  
 Pro Arg Ile Val Glu Gln Ile Phe Thr Ser Ile Leu Ser Ser Ala Ala  
 115 120 125  
 Asn Ile Glu Tyr Thr Val Arg Val Ser Tyr Met Glu Ile Tyr Met Glu  
 130 135 140  
 Arg Ile Arg Asp Leu Leu Ala Pro Gln Asn Asp Asn Leu Pro Val His  
 145 150 155 160  
 Glu Glu Lys Asn Arg Gly Val Tyr Val Lys Gly Leu Leu Glu Ile Tyr  
 165 170 175  
 Val Ser Ser Val Gln Glu Val Tyr Glu Val Met Arg Arg Gly Gly Asn  
 180 185 190  
 Ala Arg Ala Val Ala Ala Thr Asn Met Asn Gln Glu Ser Ser Arg Ser  
 195 200 205  
 His Ser Ile Phe Val Ile Thr Ile Thr Gln Lys Asn Val Glu Thr Gly  
 210 215 220  
 Ser Ala Lys Ser Gly Gln Leu Phe Leu Val Asp Leu Ala Gly Ser Glu  
 225 230 235 240  
 Lys Val Gly Lys Thr Gly Ala Ser Gly Gln Thr Leu Glu Glu Ala Lys

	245	250	255												
Lys	Ile	Asn	Lys	Ser	Leu	Ser	Ala	Leu	Gly	Met	Val	Ile	Asn	Ala	Leu
	260		265		270										
Thr	Asp	Gly	Lys	Ser	Ser	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Leu	Thr
	275		280		285										
Arg	Ile	Leu	Gln	Glu	Ser	Leu	Gly	Gly	Asn	Ser	Arg	Thr	Thr	Leu	Ile
	290		295		300										
Ile	Asn	Cys	Ser	Pro	Ser	Ser	Tyr	Asn	Asp	Ala	Glu	Thr	Leu	Ser	Thr
	305		310		315		320								
Leu	Arg	Phe	Gly	Met	Arg	Ala	Lys	Ser	Ile	Lys	Asn	Lys	Ala	Lys	Val
	325		330		335										
Asn	Ala	Glu	Leu	Ser	Pro	Ala	Glu	Leu	Lys	Gln	Met	Leu	Ala	Lys	Ala
	340		345		350										
Lys	Thr	Gln	Ile	Thr	Ser	Phe	Glu	Asn	Tyr	Ile	Val	Asn	Leu	Glu	Ser
	355		360		365										
Glu	Val	Gln	Val	Trp	Arg	Gly	Gly	Glu	Thr	Val	Pro	Lys	Glu	Lys	Trp
	370		375		380										
Val	Pro	Pro	Leu	Glu	Leu	Ala	Ile	Thr	Pro	Ser	Lys	Ser	Ala	Ser	Thr
	385		390		395		400								
Thr	Ala	Arg	Pro	Ser	Thr	Pro	Ser	Arg	Leu	Leu	Pro	Glu	Ser	Arg	Ala
	405		410		415										
Glu	Thr	Pro	Ala	Ile	Ser	Asp	Arg	Ala	Gly	Thr	Pro	Ser	Leu	Pro	Leu
	420		425		430										
Asp	Lys	Asp	Glu	Arg	Glu	Glu	Phe	Leu	Arg	Arg	Glu	Asn	Glu	Leu	Gln
	435		440		445										
Asp	Gln	Ile	Ala	Glu	Lys	Glu	Ser	Ile	Ala	Ala	Ala	Ala	Glu	Arg	Gln
	450		455		460										
Leu	Arg	Glu	Thr	Lys	Glu	Glu	Leu	Ile	Ala	Leu	Lys	Asp	His	Asp	Ser
	465		470		475		480								
Lys	Leu	Gly	Lys	Glu	Asn	Glu	Arg	Leu	Ile	Ser	Glu	Ser	Asn	Glu	Phe
	485		490		495										
Lys	Met	Gln	Leu	Glu	Arg	Leu	Ala	Phe	Glu	Asn	Lys	Glu	Ala	Gln	Ile
	500		505		510										
Thr	Ile	Asp	Gly	Leu	Lys	Asp	Ala	Asn	Ser	Glu	Leu	Thr	Ala	Glu	Leu
	515		520		525										
Asp	Glu	Val	Lys	Gln	Gln	Met	Leu	Asp	Met	Lys	Met	Ser	Ala	Lys	Glu
	530		535		540										
Thr	Ser	Ala	Val	Leu	Asp	Glu	Lys	Glu	Lys	Lys	Ala	Glu	Lys	Met	
	545		550		555		560								
Ala	Lys	Met	Met	Ala	Gly	Phe	Asp	Leu	Ser	Gly	Asp	Val	Phe	Ser	Asp
	565		570		575										
Asn	Glu	Arg	Ala	Val	Ala	Asp	Ala	Ile	Ala	Gln	Leu	Asp	Ala	Leu	Phe
	580		585		590										
Glu	Ile	Ser	Ser	Ala	Gly	Asp	Ala	Ile	Pro	Pro	Glu	Asp	Ile	Lys	Ala
	595		600		605										
Leu	Arg	Glu	Lys	Leu	Val	Glu	Thr	Gln	Gly	Phe	Val	Arg	Gln	Ala	Glu
	610		615		620										
Leu	Ser	Ser	Phe	Ser	Ala	Ala	Ser	Ser	Asp	Ala	Glu	Ala	Arg	Lys	Arg
	625		630		635		640								
Ala	Glu	Leu	Glu	Ala	Arg	Leu	Glu	Ala	Leu	Gln	Gln	Glu	His	Glu	Glu
	645		650		655										
Leu	Leu	Ser	Arg	Asn	Leu	Thr	Glu	Ala	Asp	Lys	Glu	Glu	Val	Lys	Ala
	660		665		670										
Leu	Leu	Ala	Lys	Ser	Leu	Ser	Asp	Lys	Ser	Ala	Val	Gln	Val	Glu	Leu
	675		680		685										
Val	Glu	Gln	Leu	Lys	Ala	Asp	Ile	Ala	Leu	Lys	Asn	Ser	Glu	Thr	Glu
	690		695		700										
His	Leu	Lys	Ala	Leu	Val	Asp	Asp	Leu	Gln	Arg	Arg	Val	Lys	Ala	Gly
	705		710		715		720								
Gly	Ala	Gly	Val	Ala	Met	Ala	Asn	Gly	Lys	Thr	Val	Gln	Gln	Gln	Leu
	725		730		735										
Ala	Glu	Phe	Asp	Val	Met	Lys	Lys	Ser	Leu	Met	Arg	Asp	Leu	Gln	Asn
	740		745		750										

Arg	Cys	Glu	Arg	Val	Val	Glu	Leu	Glu	Ile	Ser	Leu	Asp	Glu	Thr	Arg	
755						760						765				
Glu	Gln	Tyr	Asn	Asn	Val	Leu	Arg	Ser	Ser	Asn	Asn	Arg	Ala	Gln	Gln	
770						775					780					
Lys	Lys	Met	Ala	Phe	Leu	Glu	Arg	Asn	Leu	Glu	Gln	Leu	Thr	Gln	Val	
785						790				795			800			
Gln	Arg	Gln	Leu	Val	Glu	Gln	Asn	Ser	Ala	Leu	Lys	Lys	Glu	Val	Ala	
						805				810			815			
Ile	Ala	Glu	Arg	Lys	Leu	Met	Ala	Arg	Asn	Glu	Arg	Ile	Gln	Ser	Leu	
						820				825			830			
Glu	Ser	Leu	Leu	Gln	Glu	Ser	Gln	Glu	Lys	Met	Ala	Gln	Ala	Asn	His	
						835				840			845			
Lys	Phe	Glu	Val	Gln	Leu	Ala	Ala	Val	Lys	Asp	Arg	Leu	Glu	Ala	Ala	
						850				855			860			
Lys	Ala	Gly	Ser	Thr	Arg	Gly	Leu	Gly	Thr	Asp	Ala	Gly	Leu	Gly	Gly	
						865				870			875		880	
Phe	Ser	Ile	Gly	Ser	Arg	Ile	Ala	Lys	Pro	Leu	Arg	Gly	Gly	Asp		
						885				890			895			
Ala	Val	Ala	Gly	Ala	Thr	Ala	Thr	Asn	Pro	Thr	Ile	Ala	Thr	Leu	Gln	
						900				905			910			
Gln	Asn	Pro	Pro	Glu	Asn	Lys	Arg	Ser	Ser	Trp	Phe	Phe	Gln	Lys	Ser	
						915				920			925			

<210> 24  
 <211> 1031  
 <212> PRT  
 <213> Strongylocentrotus purpuratus

<400> 24																
Met	Ala	Asp	Pro	Ala	Glu	Cys	Asn	Ile	Lys	Val	Val	Cys	Arg	Val	Arg	
1										5		10			15	
Pro	Met	Asn	Ala	Thr	Glu	Gln	Asn	Thr	Ser	His	Ile	Cys	Thr	Lys	Phe	
										20		25			30	
Ile	Ser	Glu	Glu	Gln	Val	Gln	Ile	Gly	Gly	Lys	Leu	Asn	Met	Phe	Asp	
										35		40			45	
Arg	Ile	Phe	Lys	Pro	Asn	Thr	Thr	Gln	Glu	Glu	Val	Tyr	Asn	Lys	Ala	
										50		55			60	
Ala	Arg	Gln	Ile	Val	Lys	Asp	Val	Leu	Asp	Gly	Tyr	Asn	Gly	Thr	Ile	
										65		70			80	
Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	Phe	Thr	Met	Glu	Gly	
										85		90			95	
Val	Met	Gly	Asn	Pro	Gln	Tyr	Met	Gly	Ile	Ile	Pro	Arg	Ile	Val	Gln	
										100		105			110	
Asp	Ile	Phe	Asn	His	Ile	Tyr	Gln	Met	Asp	Glu	Ser	Leu	Glu	Phe	His	
										115		120			125	
Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Met	Asp	Arg	Ile	Arg	Asp	Leu	
										130		135			140	
Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys	Asn	Arg	
										145		150			160	
Val	Pro	Phe	Val	Lys	Gly	Ala	Thr	Glu	Arg	Phe	Ala	Ser	Ser	Pro	Glu	
										165		170			175	
Glu	Val	Met	Asp	Val	Ile	Glu	Glu	Gly	Lys	Ser	Asn	Arg	His	Ile	Ala	
										180		185			190	
Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile	Phe	Leu	
										195		200			205	
Ile	Gln	Val	Lys	Gln	Glu	Asn	Met	Glu	Thr	Lys	Lys	Leu	Ser	Gly		
										210		215			220	
Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser	Lys	Thr	
										225		230			240	
Gly	Ala	Glu	Gly	Thr	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Lys	Ser		
										245		250			255	
Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Asp	Gly	Lys	Lys	

260	265	270
Ser His Ile Pro Tyr Arg Asp Ser	Lys Met Thr Arg Ile	Leu Gln Glu
275	280	285
Ser Leu Gly Gly Asn Ala Arg	Thr Thr Ile Val Ile	Cys Cys Ser Pro
290	295	300
Ser Ser Phe Asn Glu Ser	Glu Ser Lys Ser Thr	Leu Met Phe Gly Gln
305	310	315
Arg Ala Lys Thr Ile Lys Asn Thr Val	Thr Val Asn Met	Glu Leu Thr
325	330	335
Ala Glu Glu Trp Arg Asn Arg Tyr	Glu Lys Glu Lys	Glu Lys Asn Gly
340	345	350
Arg Leu Lys Ala Gln Leu Leu	Ile Leu Glu Asn Glu	Leu Gln Arg Trp
355	360	365
Arg Ala Gly Glu Ser Val Pro	Val Lys Glu Gln	Gly Asn Lys Asn Asp
370	375	380
Glu Ile Leu Lys Glu Met Met	Lys Pro Lys Gln	Met Thr Val His Val
385	390	395
Ser Glu Glu Glu Asn Lys Trp	Glu Glu Lys Val	Lys Leu Tyr
405	410	415
Glu Gln Leu Asp Glu Lys Asp Ser	Glu Ile Asp Asn Gln	Ser Arg Leu
420	425	430
Thr Glu Lys Leu Lys Gln Gln	Met Leu Glu Gln Glu	Leu Leu Ser
435	440	445
Ser Met Gln Arg Asp Tyr Glu	Leu Leu Gln Ser	Gln Met Gly Arg Leu
450	455	460
Glu Ala Glu Asn Ala Ala Lys	Glu Ala Lys Glu Val	Leu Gln
465	470	475
Ala Leu Glu Glu Met Ala Val Asn	Tyr Asp Glu Lys Ser	Lys Glu Val
485	490	495
Glu Asp Lys Asn Arg Met Asn Glu	Thr Leu Ser Glu Glu Val	Asn Glu
500	505	510
Lys Met Thr Ala Leu His Thr	Thr Ser Thr Glu Leu Gln	Lys Leu Gln
515	520	525
Glu Leu Glu Gln His Gln Arg	Arg Arg Arg Ile Thr	Glu Met Met Ala Ser
530	535	540
Leu Leu Lys Asp Leu Gly Glu	Ile Gly Thr Ala Leu Gly	Gly Asn Ala
545	550	555
Ala Asp Met Lys Pro Asn Val Glu Asn	Ile Glu Lys Val Asp	Glu Glu
565	570	575
Phe Thr Met Ala Arg Leu Phe Val	Ser Lys Met Lys Thr	Glu Val Lys
580	585	590
Thr Met Ser Gln Arg Cys Lys	Ile Leu Glu Ala Ser Asn	Ala Glu Asn
595	600	605
Glu Thr Lys Ile Arg Thr Ser	Glu Asp Glu Leu Asp	Ser Cys Arg Met
610	615	620
Thr Ile Gln Gln His Glu	Ala Lys Met Lys Ser	Leu Ser Glu Asn Ile
625	630	635
Arg Glu Thr Glu Gly Lys Lys	Arg His Leu Glu Asp Ser	Leu Asp Met
645	650	655
Leu Asn Glu Glu Ile Val Lys	Leu Arg Ala Ala Glu Glu	Ile Arg Leu
660	665	670
Thr Asp Gln Glu Asp Lys Lys	Arg Glu Glu Asp Lys	Met Gln Ser
675	680	685
Ala Thr Glu Met Gln Ala Ser	Met Ser Glu Gln	Met Glu Ser His Arg
690	695	700
Asp Ala His Gln Lys Gln	Leu Ala Asn Leu Arg	Thr Glu Ile Asn Glu
705	710	715
Lys Glu His Gln Met Glu	Glu Leu Lys Asp Val	Asn Gln Arg Met Thr
725	730	735
Leu Gln His Glu Lys Leu Gln	Leu Asp Tyr Glu Lys	Leu Lys Ile Glu
740	745	750
Glu Ala Glu Lys Ala Ala Lys	Leu Arg Glu Leu Ser	Gln Gln Phe Asp
755	760	765

Arg Arg Glu Gln Ala Lys Gln Asp Leu Lys Gly Leu Glu Glu Thr Val  
 770 775 780  
 Ala Lys Glu Leu Gln Thr Leu His Asn Leu Arg Lys Leu Phe Val Ser  
 785 790 795 800  
 Asp Leu Gln Asn Arg Val Lys Lys Ala Leu Glu Gly Gly Asp Arg Asp  
 805 810 815  
 Asp Asp Ser Gly Gly Ser Gln Ala Gln Lys Gln Lys Ile Ser Phe Leu  
 820 825 830  
 Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His Lys Gln Leu Val Arg  
 835 840 845  
 Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu Glu Arg Arg Leu  
 850 855 860  
 Arg Ala Thr Ser Glu Arg Val Lys Ala Leu Glu Met Ser Leu Lys Glu  
 865 870 875 880  
 Thr Lys Glu Gly Ala Met Arg Asp Arg Lys Arg Tyr Gln Gln Glu Val  
 885 890 895  
 Asp Arg Ile Arg Glu Ala Val Arg Gln Arg Asn Phe Ala Lys Arg Gly  
 900 905 910  
 Ser Ser Ala Gln Ile Ala Lys Ala Ile Arg Ala Gly His Pro Pro Pro  
 915 920 925  
 Ser Pro Gly Gly Ser Thr Gly Ile Arg Gly Gly Tyr Ser Gly Ile  
 930 935 940  
 Arg Gly Gly Gly Ser Pro Val Ile Arg Pro Pro Ser His Gly Ser Pro  
 945 950 955 960  
 Glu Pro Ile Ser His Asn Asn Ser Phe Glu Lys Ser Leu Asn Pro Asn  
 965 970 975  
 Asp Ala Glu Asn Met Glu Lys Lys Ala Asn Lys Arg Leu Pro Lys Leu  
 980 985 990  
 Pro Pro Gly Gly Asn Lys Leu Thr Glu Ser Asp Ile Ala Ala Met Lys  
 995 1000 1005  
 Ala Arg Ser Lys Ala Arg Asn Asn Thr Pro Gly Lys Ala Pro Leu Thr  
 1010 1015 1020  
 Thr Ser Gly Glu Gln Gly Ser  
 1025 1030

<210> 25  
 <211> 935  
 <212> PRT  
 <213> Syncaphalastrum racemosum

<400> 25  
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 Ser Leu Glu Ile Arg Glu Gly Gly Thr Pro Ile Ile Asp Ile Asp Pro  
 20 25 30  
 Glu Gly Thr Gln Leu Glu Leu Lys Gly Lys Glu Phe Lys Gly Asn Phe  
 35 40 45  
 Asn Phe Asp Lys Val Phe Gly Met Asn Thr Ala Gln Lys Asp Val Phe  
 50 55 60  
 Asp Tyr Ser Ile Lys Thr Ile Val Asp Asp Val Thr Ala Gly Tyr Asn  
 65 70 75 80  
 Gly Thr Val Phe Ala Tyr Gly Gln Thr Gly Ser Gly Lys Thr Phe Thr  
 85 90 95  
 Met Met Gly Ala Asp Ile Asp Asp Glu Lys Thr Lys Gly Ile Ile Pro  
 100 105 110  
 Arg Ile Val Glu Gln Ile Phe Asp Ser Ile Met Ala Ser Pro Ser Asn  
 115 120 125  
 Leu Glu Phe Thr Val Lys Val Ser Tyr Met Glu Ile Tyr Met Glu Lys  
 130 135 140  
 Val Arg Asp Leu Leu Asn Pro Ser Ser Glu Asn Leu Pro Ile His Glu  
 145 150 155 160  
 Asp Lys Thr Lys Gly Val Tyr Val Lys Gly Leu Leu Glu Val Tyr Val

165	170	175
Gly Ser Thr Asp	Glu Val Tyr Glu Val	Met Arg Arg Gly Ser Asn Asn
180	185	190
Arg Val Val Ala Tyr Thr Asn	Met Asn Ala Glu Ser Ser	Arg Ser His
195	200	205
Ser Ile Val Met Phe Thr Ile Thr Gln Lys Asn Val Asp	Thr Gly Ala	
210	215	220
Ala Lys Ser Gly Lys Leu Tyr Leu Val Asp	Leu Ala Gly Ser Glu Lys	
225	230	240
Val Gly Lys Thr Gly Ala Ser Gly Gln Thr	Leu Glu Glu Ala Lys Lys	
245	250	255
Ile Asn Lys Ser Leu Thr Ala Leu Gly Met Val Ile Asn	Ala Leu Thr	
260	265	270
Asp Gly Lys Ser Ser His Val	Pro Tyr Arg Asp Ser Lys	Leu Thr Arg
275	280	285
Ile Leu Gln Glu Ser Leu Gly	Gly Asn Ser Arg	Thr Thr Leu Ile Ile
290	295	300
Asn Cys Ser Pro Ser Ser Tyr Asn Glu Ala Glu	Thr Leu Ser Thr	Leu
305	310	315
Arg Phe Gly Ala Arg Ala Lys Ser	Ile Lys Asn Lys Ala Lys Val	Asn
325	330	335
Ala Asp Leu Ser Pro Ala Glu Leu Lys	Ala Leu Leu Lys Lys Val Lys	
340	345	350
Ser Glu Ala Val Thr Tyr Gln Thr	Tyr Ile Ala Ala Leu Glu Gly Glu	
355	360	365
Val Asn Val Trp Arg Thr Gly	Gly Thr Val Pro Glu Gly Lys Trp Val	
370	375	380
Thr Met Asp Lys Val Ser Lys Gly Asp Phe	Ala Gly Leu Pro Pro Ala	
385	390	395
Pro Gly Phe Lys Ser Pro Val Ser Asp	Glu Gly Ser Arg Pro Ala Thr	
405	410	415
Pro Val Pro Thr Leu Glu Lys Asp	Glu Arg Glu Glu Phe Ile Lys Arg	
420	425	430
Glu Asn Glu Leu Met Asp Gln	Ile Ser Glu Lys Glu Thr Glu Leu Thr	
435	440	445
Asn Arg Glu Lys Leu Leu Glu Ser	Leu Arg Glu Glu Met Gly Tyr Tyr	
450	455	460
Lys Glu Gln Glu Gln Ser Val Thr Lys Glu Asn Gln Gln Met Thr	Ser	
465	470	475
Glu Leu Ser Glu Leu Arg Leu Gln Leu Gln Lys Val Ser	Tyr Glu Ser	
485	490	495
Lys Glu Asn Ala Ile Thr Val Asp	Ser Leu Lys Glu Ala Asn Gln Asp	
500	505	510
Leu Met Ala Glu Leu Glu Leu Lys Lys Asn	Leu Ser Glu Met Arg	
515	520	525
Gln Ala His Lys Asp Ala Thr Asp	Ser Asp Lys Glu Lys Arg Lys Ala	
530	535	540
Glu Lys Met Ala Gln Met Met Ser	Gly Phe Asp Pro Ser Gly Ile Leu	
545	550	555
Asn Asp Lys Glu Arg Gln Ile Arg Asn	Ala Leu Ser Lys Leu Asp Gly	
565	570	575
Glu Gln Gln Thr Leu Thr Val	Glu Asp Leu Val Ser Leu Arg Arg	
580	585	590
Glu Leu Ala Glu Ser Lys Met	Leu Val Glu Gln His Thr Lys Thr Ile	
595	600	605
Ser Asp Leu Ser Ala Asp Lys	Asp Ala Met Glu Ala Lys Lys Ile Glu	
610	615	620
Leu Glu Gly Arg Leu Gly	Ala Leu Glu Lys Glu Tyr Glu Glu Leu	Leu
625	630	640
Asp Lys Thr Ile Ala Glu Glu Ala Asn Met	Gln Asn Ala Asp Val	
645	650	655
Asp Asn Leu Ser Ala Leu Lys Thr	Lys Leu Glu Ala Gln Tyr Ala Glu	
660	665	670

Lys Lys Glu Val Gln Gln Lys Glu Ile Asp Asp Leu Lys Arg Glu Leu  
 675 680 685  
 Asp Arg Lys Gln Ser Gly His Glu Lys Leu Ser Ala Ala Met Thr Asp  
 690 695 700  
 Leu Arg Ala Ala Asn Asp Gln Leu Gln Ala Ala Leu Ser Glu Gln Pro  
 705 710 715 720  
 Phe Gln Ala Pro Gln Asp Asn Ser Asp Met Thr Glu Lys Glu Lys Asp  
 725 730 735  
 Ile Glu Arg Thr Arg Lys Ser Met Ala Gln Gln Leu Ala Asp Phe Glu  
 740 745 750  
 Val Met Lys Lys Ala Leu Met Arg Asp Leu Gln Asn Arg Cys Glu Lys  
 755 760 765  
 Val Val Glu Leu Glu Met Ser Leu Asp Glu Thr Arg Glu Gln Tyr Asn  
 770 775 780  
 Asn Val Leu Arg Ala Ser Asn Asn Lys Ala Gln Gln Lys Lys Met Ala  
 785 790 795 800  
 Phe Leu Glu Arg Asn Leu Glu Gln Leu Thr Asn Val Gln Lys Gln Leu  
 805 810 815  
 Val Glu Gln Asn Ala Ser Leu Lys Lys Glu Val Ala Leu Ala Glu Arg  
 820 825 830  
 Lys Leu Ile Ala Arg Asn Glu Arg Ile Gln Ser Leu Glu Thr Leu Leu  
 835 840 845  
 His Asn Ala Gln Asp Lys Leu Leu Asn Gln Asn Lys Lys Phe Glu Gln  
 850 855 860  
 Gln Leu Ala Thr Val Arg Glu Arg Leu Glu Gln Ala Arg Ser Gln Lys  
 865 870 875 880  
 Ser Gln Asn Ser Leu Ala Ala Leu Asn Phe Ser Arg Ile Ala Lys Pro  
 885 890 895  
 Leu Arg Gly Asn Gly Ala Ala Ile Asp Asn Gly Ser Asp Asp Gly Ser  
 900 905 910  
 Leu Pro Thr Ser Pro Thr Asp Lys Arg Asp Lys Arg Ser Ser Trp Met  
 915 920 925  
 Pro Gly Phe Met Asn Ser Arg  
 930 935

<210> 26  
 <211> 1032  
 <212> PRT  
 <213> Homo sapiens

<400> 26

Met	Ala	Glu	Thr	Asn	Asn	Glu	Cys	Ser	Ile	Lys	Val	Leu	Cys	Arg	Phe
1															
														15	
Arg	Pro	Leu	Asn	Gln	Ala	Glu	Ile	Leu	Arg	Gly	Asp	Lys	Phe	Ile	Pro
														30	
Ile	Phe	Gln	Gly	Asp	Asp	Ser	Val	Val	Ile	Gly	Gly	Lys	Pro	Tyr	Val
														45	
Phe	Asp	Arg	Val	Phe	Pro	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val	Tyr	His
														60	
Ala	Cys	Ala	Met	Gln	Ile	Val	Lys	Asp	Val	Leu	Ala	Gly	Tyr	Asn	Gly
														80	
Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met
														95	
Glu	Gly	Lys	Leu	His	Asp	Pro	Gln	Leu	Met	Gly	Ile	Ile	Pro	Arg	Ile
														110	
Ala	Arg	Asp	Ile	Phe	Asn	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu
														125	
Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg
														140	
Asp	Leu	Leu	Asp	Val	Thr	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys
														160	
Asn	Arg	Val	Pro	Phe	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser

165	170	175
Pro Glu Glu Ile Leu Asp Val Ile Asp	Glu Gly Lys Ser Asn Arg His	
180	185	190
Val Ala Val Thr Asn Met Asn Glu His Ser Ser Arg Ser His Ser Ile		
195	200	205
Phe Leu Ile Asn Ile Lys Gln Glu Asn Met Glu Thr Glu Gln Lys Leu		
210	215	220
Ser Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys Val Ser		
225	230	235
Lys Thr Gly Ala Glu Gly Ala Val Leu Asp Glu Ala Lys Asn Ile Asn		
245	250	255
Lys Ser Leu Ser Ala Leu Gly Asn Val Ile Ser Ala Leu Ala Glu Gly		
260	265	270
Thr Lys Ser Tyr Val Pro Tyr Arg Asp Ser Lys Met Thr Arg Ile Leu		
275	280	285
Gln Asp Ser Leu Gly Gly Asn Cys Arg Thr Thr Met Phe Ile Cys Cys		
290	295	300
Ser Pro Ser Ser Tyr Asn Asp Ala Glu Thr Lys Ser Thr Leu Met Phe		
305	310	315
Gly Gln Arg Ala Lys Thr Ile Lys Asn Thr Ala Ser Val Asn Leu Glu		
325	330	335
Leu Thr Ala Glu Gln Trp Lys Lys Tyr Glu Lys Glu Lys Glu Lys		
340	345	350
Thr Lys Ala Gln Lys Glu Thr Ile Ala Lys Leu Glu Ala Glu Leu Ser		
355	360	365
Arg Trp Arg Asn Gly Glu Asn Val Pro Glu Thr Glu Arg Leu Ala Gly		
370	375	380
Glu Glu Ala Ala Leu Gly Ala Glu Leu Cys Glu Glu Thr Pro Val Asn		
385	390	395
Asp Asn Ser Ser Ile Val Val Arg Ile Ala Pro Glu Glu Arg Gln Lys		
405	410	415
Tyr Glu Glu Glu Ile Arg Arg Leu Tyr Lys Gln Leu Asp Asp Lys Asp		
420	425	430
Asp Glu Ile Asn Gln Gln Ser Gln Leu Ile Glu Lys Leu Lys Gln Gln		
435	440	445
Met Leu Asp Gln Glu Glu Leu Leu Val Ser Thr Arg Gly Asp Asn Glu		
450	455	460
Lys Val Gln Arg Glu Leu Ser His Leu Gln Ser Glu Asn Asp Ala Ala		
465	470	475
Lys Asp Glu Val Lys Glu Val Leu Gln Ala Leu Glu Glu Leu Ala Val		
485	490	495
Asn Tyr Asp Gln Lys Ser Gln Glu Val Glu Glu Lys Ser Gln Gln Asn		
500	505	510
Gln Leu Leu Val Asp Glu Leu Ser Gln Lys Val Ala Thr Met Leu Ser		
515	520	525
Leu Glu Ser Glu Leu Gln Arg Leu Gln Glu Val Ser Gly His Gln Arg		
530	535	540
Lys Arg Ile Ala Glu Val Leu Asn Gly Leu Met Lys Asp Leu Ser Glu		
545	550	555
Phe Ser Val Ile Val Gly Asn Gly Glu Ile Lys Leu Pro Val Glu Ile		
565	570	575
Ser Gly Ala Ile Glu Glu Glu Phe Thr Val Ala Arg Leu Tyr Ile Ser		
580	585	590
Lys Ile Lys Ser Glu Val Lys Ser Val Val Lys Arg Cys Arg Gln Leu		
595	600	605
Glu Asn Leu Gln Val Glu Cys His Arg Lys Met Glu Val Thr Gly Arg		
610	615	620
Glu Leu Ser Ser Cys Gln Leu Leu Ile Ser Gln His Glu Ala Lys Ile		
625	630	635
Arg Ser Leu Thr Glu Tyr Met Gln Ser Val Glu Leu Lys Lys Arg His		
645	650	655
Leu Glu Glu Ser Tyr Asp Ser Leu Ser Asp Glu Leu Ala Lys Leu Gln		
660	665	670

Ala Gln Glu Thr Val His Glu Val Ala Leu Lys Asp Lys Glu Pro Asp  
 675 680 685  
 Thr Gln Asp Ala Asp Glu Val Lys Lys Ala Leu Glu Leu Gln Met Glu  
 690 695 700  
 Ser His Arg Glu Ala His His Arg Gln Leu Ala Arg Leu Arg Asp Glu  
 705 710 715 720  
 Ile Asn Glu Lys Gln Lys Thr Ile Asp Glu Leu Lys Asp Leu Asn Gln  
 725 730 735  
 Lys Leu Gln Leu Glu Leu Glu Lys Leu Gln Ala Asp Tyr Glu Lys Leu  
 740 745 750  
 Lys Ser Glu Glu His Glu Lys Ser Thr Lys Leu Gln Glu Leu Thr Phe  
 755 760 765  
 Leu Tyr Glu Arg His Glu Gln Ser Lys Gln Asp Leu Lys Gly Leu Glu  
 770 775 780  
 Glu Thr Val Ala Arg Glu Leu Gln Thr Leu His Asn Leu Arg Lys Leu  
 785 790 795 800  
 Phe Val Gln Asp Val Thr Thr Arg Val Lys Lys Ser Ala Glu Met Glu  
 805 810 815  
 Pro Glu Asp Ser Gly Gly Ile His Ser Gln Lys Gln Lys Ile Ser Phe  
 820 825 830  
 Leu Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His Lys Gln Leu Val  
 835 840 845  
 Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu Glu Lys Arg  
 850 855 860  
 Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu Gly Ala Leu Lys  
 865 870 875 880  
 Glu Ala Lys Glu Gly Ala Met Lys Asp Lys Arg Arg Tyr Gln Gln Glu  
 885 890 895  
 Val Asp Arg Ile Lys Glu Ala Val Arg Tyr Lys Ser Ser Gly Lys Arg  
 900 905 910  
 Ala His Ser Ala Gln Ile Ala Lys Pro Val Arg Pro Gly His Tyr Pro  
 915 920 925  
 Ala Ser Ser Pro Thr Asn Pro Tyr Gly Thr Arg Ser Pro Glu Cys Ile  
 930 935 940  
 Ser Tyr Thr Asn Ser Leu Phe Gln Asn Tyr Gln Asn Leu Tyr Leu Gln  
 945 950 955 960  
 Ala Thr Pro Ser Ser Thr Ser Asp Met Tyr Phe Ala Asn Ser Cys Thr  
 965 970 975  
 Ser Ser Gly Ala Thr Ser Ser Gly Gly Pro Leu Ala Ser Tyr Gln Lys  
 980 985 990  
 Ala Asn Met Asp Asn Gly Asn Ala Thr Asp Ile Asn Asp Asn Arg Ser  
 995 1000 1005  
 Asp Leu Pro Cys Gly Tyr Glu Ala Glu Asp Gln Ala Lys Leu Phe Pro  
 1010 1015 1020  
 Leu His Gln Glu Thr Ala Ala Ser  
 1025 1030

<210> 27  
 <211> 1027  
 <212> PRT  
 <213> Mus musculus

<400> 27  
 Met Ala Glu Thr Asn Asn Glu Cys Ser Ile Lys Val Leu Cys Arg Phe  
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 Arg Pro Leu Asn Gln Ala Glu Ile Leu Arg Gly Asp Lys Phe Ile Pro  
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 Ile Phe Gln Gly Asp Asp Ser Val Ile Ile Gly Gly Lys Pro Tyr Val  
 35 40 45  
 Phe Asp Arg Val Phe Pro Pro Asn Thr Thr Gln Glu Gln Val Tyr His  
 50 55 60  
 Ala Cys Ala Met Gln Ile Val Lys Asp Val Leu Ala Gly Tyr Asn Gly

65	70	75	80
Thr Ile Phe Ala Tyr Gly Gln Thr Ser Ser Gly Lys Thr His Thr Met			
85	90	95	
Glu Gly Lys Leu His Asp Pro Gln Leu Met Gly Ile Ile Pro Arg Ile			
100	105	110	
Ala Arg Asp Ile Phe Asn His Ile Tyr Ser Met Asp Glu Asn Leu Glu			
115	120	125	
Phe His Ile Lys Val Ser Tyr Phe Glu Ile Tyr Leu Asp Lys Ile Arg			
130	135	140	
Asp Leu Leu Asp Val Thr Lys Thr Asn Leu Ser Val His Glu Asp Lys			
145	150	155	160
Asn Arg Val Pro Phe Val Lys Gly Cys Thr Glu Arg Phe Val Ser Ser			
165	170	175	
Pro Glu Glu Ile Leu Asp Val Ile Asp Glu Gly Lys Ser Asn Arg His			
180	185	190	
Val Ala Val Thr Asn Met Asn Glu His Ser Ser Arg Ser His Ser Ile			
195	200	205	
Phe Leu Ile Asn Ile Lys Gln Glu Asn Val Glu Thr Glu Gln Lys Leu			
210	215	220	
Ser Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys Val Ser			
225	230	235	240
Lys Thr Gly Ala Glu Gly Ala Val Leu Asp Glu Ala Lys Asn Ile Asn			
245	250	255	
Lys Ser Leu Ser Ala Leu Gly Asn Val Ile Ser Ala Leu Ala Glu Gly			
260	265	270	
Thr Lys Ser Tyr Val Pro Tyr Arg Asp Thr Lys Met Thr Arg Ile Leu			
275	280	285	
Gln Asp Ser Leu Gly Gly Asn Cys Arg Thr Thr Met Phe Ile Cys Cys			
290	295	300	
Ser Pro Ser Ser Tyr Asn Asp Ala Glu Thr Lys Ser Thr Leu Met Phe			
305	310	315	320
Gly Gln Arg Ala Lys Thr Ile Lys Asn Thr Ala Ser Val Asn Leu Glu			
325	330	335	
Leu Thr Ala Glu Gln Trp Lys Lys Tyr Glu Lys Glu Lys Glu Lys			
340	345	350	
Thr Lys Ala Gln Lys Glu Thr Ile Ala Asn Val Glu Ala Glu Leu Ser			
355	360	365	
Arg Trp Arg Asn Gly Glu Asn Val Pro Glu Thr Glu Arg Leu Ala Gly			
370	375	380	
Glu Asp Ser Ala Leu Gly Ala Glu Leu Cys Glu Glu Thr Pro Val Asn			
385	390	395	400
Asp Asn Ser Ser Ile Val Val Arg Ile Ala Pro Glu Glu Arg Gln Lys			
405	410	415	
Tyr Glu Glu Ile Arg Arg Leu Tyr Lys Gln Leu Asp Asp Lys Asp			
420	425	430	
Asp Glu Ile Asn Gln Gln Ser Gln Leu Ile Glu Lys Leu Lys Gln Gln			
435	440	445	
Met Leu Asp Gln Glu Glu Leu Leu Val Ser Thr Arg Gly Asp Asn Glu			
450	455	460	
Lys Val Gln Arg Glu Leu Ser His Leu Gln Ser Glu Asn Asp Ala Ala			
465	470	475	480
Lys Asp Glu Val Lys Glu Val Leu Gln Ala Leu Glu Glu Leu Ala Val			
485	490	495	
Asn Tyr Asp Gln Lys Ser Gln Glu Val Glu Glu Lys Ser Gln Gln Asn			
500	505	510	
Gln Leu Leu Val Asp Glu Leu Ser Gln Lys Val Ala Thr Met Leu Ser			
515	520	525	
Leu Glu Ser Glu Leu Gln Arg Leu Gln Glu Val Ser Gly His Gln Arg			
530	535	540	
Lys Arg Ile Ala Glu Val Leu Asn Gly Leu Met Arg Asp Leu Ser Glu			
545	550	555	560
Phe Ser Val Ile Val Gly Asn Gly Glu Ile Lys Leu Pro Val Glu Ile			
565	570	575	

Ser Gly Ala Ile Glu Glu Glu Phe Thr Val Ala Arg Leu Tyr Ile Ser  
 580 585 590  
 Lys Ile Lys Ser Glu Val Lys Ser Val Val Lys Arg Cys Arg Gln Leu  
 595 600 605  
 Glu Asn Leu Gln Val Glu Cys His Arg Lys Met Glu Val Thr Gly Arg  
 610 615 620  
 Glu Leu Ser Ser Cys Gln Leu Leu Ile Ser Gln His Glu Ala Lys Ile  
 625 630 635 640  
 Arg Ser Leu Thr Glu Tyr Met Gln Thr Val Glu Leu Lys Lys Arg His  
 645 650 655  
 Leu Glu Glu Ser Tyr Asp Ser Leu Ser Asp Glu Leu Ala Arg Leu Gln  
 660 665 670  
 Ala His Glu Thr Val His Glu Val Ala Leu Lys Asp Lys Glu Pro Asp  
 675 680 685  
 Thr Gln Asp Ala Glu Glu Val Lys Lys Ala Leu Glu Leu Gln Met Glu  
 690 695 700  
 Asn His Arg Glu Ala His His Arg Gln Leu Ala Arg Leu Arg Asp Glu  
 705 710 715 720  
 Ile Asn Glu Lys Gln Lys Thr Ile Asp Glu Leu Lys Asp Leu Asn Gln  
 725 730 735  
 Lys Leu Gln Leu Glu Leu Glu Lys Leu Gln Ala Asp Tyr Glu Arg Leu  
 740 745 750  
 Lys Asn Glu Glu Asn Glu Lys Ser Ala Lys Leu Gln Glu Leu Thr Phe  
 755 760 765  
 Leu Tyr Glu Arg His Glu Gln Ser Lys Gln Asp Leu Lys Gly Leu Glu  
 770 775 780  
 Glu Thr Val Ala Arg Glu Leu Gln Thr Leu His Asn Leu Arg Lys Leu  
 785 790 795 800  
 Phe Val Gln Asp Val Thr Thr Arg Val Lys Lys Ser Ala Glu Met Glu  
 805 810 815  
 Pro Glu Asp Ser Gly Gly Ile His Ser Gln Lys Gln Lys Ile Ser Phe  
 820 825 830  
 Leu Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His Lys Gln Leu Val  
 835 840 845  
 Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu Glu Lys Arg  
 850 855 860  
 Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu Gly Ala Leu Lys  
 865 870 875 880  
 Glu Ala Lys Glu Gly Ala Met Lys Asp Lys Arg Arg Tyr Gln Gln Glu  
 885 890 895  
 Val Asp Arg Ile Lys Glu Ala Val Arg Tyr Lys Ser Ser Gly Lys Arg  
 900 905 910  
 Gly His Ser Ala Gln Ile Ala Lys Pro Val Arg Pro Gly His Tyr Pro  
 915 920 925  
 Ala Ser Ser Pro Thr Asn Pro Tyr Gly Thr Arg Ser Pro Glu Cys Ile  
 930 935 940  
 Ser Tyr Thr Asn Asn Leu Phe Gln Asn Tyr Gln Asn Leu His Leu Gln  
 945 950 955 960  
 Ala Ala Pro Ser Ser Thr Ser Asp Met Tyr Phe Ala Ser Ser Gly Arg  
 965 970 975  
 Thr Ser Val Ala Pro Leu Ala Ser Tyr Gln Lys Ala Asn Met Asp Asn  
 980 985 990  
 Gly Asn Ala Thr Asp Ile Asn Asp Asn Arg Ser Asp Leu Pro Cys Gly  
 995 1000 1005  
 Tyr Glu Ala Glu Asp Gln Ala Lys Leu Phe Pro Leu His Gln Glu Thr  
 1010 1015 1020  
 Ala Ala Ser  
 1025

<210> 28  
 <211> 1111  
 <212> PRT

<213> *Saccharomyces cerevisiae*

<400> 28  
 Met Ala Arg Ser Ser Leu Pro Asn Arg Arg Thr Ala Gln Phe Glu Ala  
 1 5 10 15  
 Asn Lys Arg Arg Thr Ile Ala His Ala Pro Ser Pro Ser Leu Ser Asn  
 20 25 30  
 Gly Met His Thr Leu Thr Pro Pro Thr Cys Asn Asn Gly Ala Ala Thr  
 35 40 45  
 Ser Asp Ser Asn Ile His Val Tyr Val Arg Cys Arg Ser Arg Asn Lys  
 50 55 60  
 Arg Glu Ile Glu Glu Lys Ser Ser Val Val Ile Ser Thr Leu Gly Pro  
 65 70 75 80  
 Gln Gly Lys Glu Ile Ile Leu Ser Asn Gly Ser His Gln Ser Tyr Ser  
 85 90 95  
 Ser Ser Lys Lys Thr Tyr Gln Phe Asp Gln Val Phe Gly Ala Glu Ser  
 100 105 110  
 Asp Gln Glu Thr Val Phe Asn Ala Thr Ala Lys Asn Tyr Ile Lys Glu  
 115 120 125  
 Met Leu His Gly Tyr Asn Cys Thr Ile Phe Ala Tyr Gly Gln Thr Gly  
 130 135 140  
 Thr Gly Lys Thr Tyr Thr Met Ser Gly Asp Ile Asn Ile Leu Gly Asp  
 145 150 155 160  
 Val Gln Ser Thr Asp Asn Leu Leu Leu Gly Glu His Ala Gly Ile Ile  
 165 170 175  
 Pro Arg Val Leu Val Asp Leu Phe Lys Glu Leu Ser Ser Leu Asn Lys  
 180 185 190  
 Glu Tyr Ser Val Lys Ile Ser Phe Leu Glu Leu Tyr Asn Glu Asn Leu  
 195 200 205  
 Lys Asp Leu Leu Ser Asp Ser Glu Asp Asp Asp Pro Ala Val Asn Asp  
 210 215 220  
 Pro Lys Arg Gln Ile Arg Ile Phe Asp Asn Asn Asn Asn Ser Ser  
 225 230 235 240  
 Ile Met Val Lys Gly Met Gln Glu Ile Phe Ile Asn Ser Ala His Glu  
 245 250 255  
 Gly Leu Asn Leu Leu Met Gln Gly Ser Leu Lys Arg Lys Val Ala Ala  
 260 265 270  
 Thr Lys Cys Asn Asp Leu Ser Ser Arg Ser His Thr Val Phe Thr Ile  
 275 280 285  
 Thr Thr Asn Ile Val Glu Gln Asp Ser Lys Asp His Gly Gln Asn Lys  
 290 295 300  
 Asn Phe Val Lys Ile Gly Lys Leu Asn Leu Val Asp Leu Ala Gly Ser  
 305 310 315 320  
 Glu Asn Ile Asn Arg Ser Gly Ala Glu Asn Lys Arg Ala Gln Glu Ala  
 325 330 335  
 Gly Leu Ile Asn Lys Ser Leu Leu Thr Leu Gly Arg Val Ile Asn Ala  
 340 345 350  
 Leu Val Asp His Ser Asn His Ile Pro Tyr Arg Glu Ser Lys Leu Thr  
 355 360 365  
 Arg Leu Leu Gln Asp Ser Leu Gly Gly Met Thr Lys Thr Cys Ile Ile  
 370 375 380  
 Ala Thr Ile Ser Pro Ala Lys Ile Ser Met Glu Glu Thr Ala Ser Thr  
 385 390 395 400  
 Leu Glu Tyr Ala Thr Arg Ala Lys Ser Ile Lys Asn Thr Pro Gln Val  
 405 410 415  
 Asn Gln Ser Leu Ser Lys Asp Thr Cys Leu Lys Asp Tyr Ile Gln Glu  
 420 425 430  
 Ile Glu Lys Leu Arg Asn Asp Leu Lys Asn Ser Arg Asn Lys Gln Gly  
 435 440 445  
 Ile Phe Ile Thr Gln Asp Gln Leu Asp Leu Tyr Glu Ser Asn Ser Ile  
 450 455 460  
 Leu Ile Asp Glu Gln Asn Leu Lys Ile His Asn Leu Arg Glu Gln Ile  
 465 470 475 480

Lys Lys Phe Lys Glu Asn Tyr Leu Asn Gln Leu Asp Ile Asn Asn Leu  
 485 490 495  
 Leu Gln Ser Glu Lys Glu Lys Leu Ile Ala Ile Ile Gln Asn Phe Asn  
 500 505 510  
 Val Asp Phe Ser Asn Phe Tyr Ser Glu Ile Gln Lys Ile His His Thr  
 515 520 525  
 Asn Leu Glu Leu Met Asn Glu Val Ile Gln Gln Arg Asp Phe Ser Leu  
 530 535 540  
 Glu Asn Ser Gln Lys Gln Tyr Asn Thr Asn Gln Asn Met Gln Leu Lys  
 545 550 555 560  
 Ile Ser Gln Gln Val Leu Gln Thr Leu Asn Thr Leu Gln Gly Ser Leu  
 565 570 575  
 Asn Asn Tyr Asn Ser Lys Cys Ser Glu Val Ile Lys Gly Val Thr Glu  
 580 585 590  
 Glu Leu Thr Arg Asn Val Asn Thr His Lys Ala Lys His Asp Ser Thr  
 595 600 605  
 Leu Lys Ser Leu Leu Asn Ile Thr Thr Asn Leu Leu Met Asn Gln Met  
 610 615 620  
 Asn Glu Leu Val Arg Ser Ile Ser Thr Ser Leu Glu Ile Phe Gln Ser  
 625 630 635 640  
 Asp Ser Thr Ser His Tyr Arg Lys Asp Leu Asn Glu Ile Tyr Gln Ser  
 645 650 655  
 His Gln Gln Phe Leu Lys Asn Leu Gln Asn Asp Ile Lys Ser Cys Leu  
 660 665 670  
 Asp Ser Ile Gly Ser Ser Ile Leu Thr Ser Ile Asn Glu Ile Ser Gln  
 675 680 685  
 Asn Cys Thr Thr Asn Leu Asn Ser Met Asn Val Leu Ile Glu Asn Gln  
 690 695 700  
 Gln Ser Gly Ser Ser Lys Leu Ile Lys Glu Gln Asp Leu Glu Ile Lys  
 705 710 715 720  
 Lys Leu Lys Asn Asp Leu Ile Asn Glu Arg Arg Ile Ser Asn Gln Phe  
 725 730 735  
 Asn Gln Gln Leu Ala Glu Met Lys Arg Tyr Phe Gln Asp His Val Ser  
 740 745 750  
 Arg Thr Arg Ser Glu Phe His Asp Glu Leu Asn Lys Cys Ile Asp Asn  
 755 760 765  
 Leu Lys Asp Lys Gln Ser Lys Leu Asp Gln Asp Ile Trp Gln Lys Thr  
 770 775 780  
 Ala Ser Ile Phe Asn Glu Thr Asp Ile Val Val Asn Lys Ile His Ser  
 785 790 795 800  
 Asp Ser Ile Ala Ser Leu Ala His Asn Ala Glu Asn Thr Leu Lys Thr  
 805 810 815  
 Val Ser Gln Asn Asn Glu Ser Phe Thr Asn Asp Leu Ile Ser Leu Ser  
 820 825 830  
 Arg Gly Met Asn Met Asp Ile Ser Ser Lys Leu Arg Ser Leu Pro Ile  
 835 840 845  
 Asn Glu Phe Leu Asn Lys Ile Ser Gln Thr Ile Cys Glu Thr Cys Gly  
 850 855 860  
 Asp Asp Asn Thr Ile Ala Ser Asn Pro Val Leu Thr Ser Ile Lys Lys  
 865 870 875 880  
 Phe Gln Asn Ile Ile Cys Ser Asp Ile Ala Leu Thr Asn Glu Lys Ile  
 885 890 895  
 Met Ser Leu Ile Asp Glu Ile Gln Ser Gln Ile Glu Thr Ile Ser Asn  
 900 905 910  
 Glu Asn Asn Ile Asn Leu Ile Ala Ile Asn Glu Asn Phe Asn Ser Leu  
 915 920 925  
 Cys Asn Phe Ile Leu Thr Asp Tyr Asp Glu Asn Ile Met Gln Ile Ser  
 930 935 940  
 Lys Thr Gln Asp Glu Val Leu Ser Glu His Cys Glu Lys Leu Gln Ser  
 945 950 955 960  
 Leu Lys Ile Leu Gly Met Asp Ile Phe Thr Ala His Ser Ile Glu Lys  
 965 970 975  
 Pro Leu His Glu His Thr Arg Pro Glu Ala Ser Val Ile Lys Ala Leu

980	985	990
Pro Leu Leu Asp Tyr Pro Lys Gln Phe Gln Ile Tyr Arg Asp Ala Glu		
995	1000	1005
Asn Lys Ser Lys Asp Asp Thr Ser Asn Ser Arg Thr Cys Ile Pro Asn		
1010	1015	1020
Leu Ser Thr Asn Glu Asn Phe Pro Leu Ser Gln Phe Ser Pro Lys Thr		
1025	1030	1035
Pro Val Pro Val Pro Asp Gln Pro Leu Pro Lys Val Leu Ile Pro Lys		
1045	1050	1055
Ser Ile Asn Ser Ala Lys Ser Asn Arg Ser Lys Thr Leu Pro Asn Thr		
1060	1065	1070
Glu Gly Thr Gly Arg Glu Ser Gln Asn Asn Leu Lys Arg Arg Phe Thr		
1075	1080	1085
Thr Glu Pro Ile Leu Lys Gly Glu Glu Thr Glu Asn Asn Asp Ile Leu		
1090	1095	1100
Gln Asn Lys Lys Leu His Gln		
1105	1110	

<210> 29

<211> 706

<212> PRT

<213> *Saccharomyces cerevisiae*

<400> 29

Met Ile Gln Lys Met Ser Pro Ser Leu Arg Arg Pro Ser Thr Arg Ser			
1	5	10	15
Ser Ser Gly Ser Ser Asn Ile Pro Gln Ser Pro Ser Val Arg Ser Thr			
20	25	30	
Ser Ser Phe Ser Asn Leu Thr Arg Asn Ser Ile Arg Ser Thr Ser Asn			
35	40	45	
Ser Gly Ser Gln Ser Ile Ser Ala Ser Ser Thr Arg Ser Asn Ser Pro			
50	55	60	
Leu Arg Ser Val Ser Ala Lys Ser Asp Pro Phe Leu His Pro Gly Arg			
65	70	75	80
Ile Arg Ile Arg Arg Ser Asp Ser Ile Asn Asn Asn Ser Arg Lys Asn			
85	90	95	
Asp Thr Tyr Thr Gly Ser Ile Thr Val Thr Ile Arg Pro Lys Pro Arg			
100	105	110	
Ser Val Gly Thr Ser Arg Asp His Val Gly Leu Lys Ser Pro Arg Tyr			
115	120	125	
Ser Gln Pro Arg Ser Asn Ser His His Gly Ser Asn Thr Phe Val Arg			
130	135	140	
Asp Pro Trp Phe Ile Thr Asn Asp Lys Thr Ile Val His Glu Glu Ile			
145	150	155	160
Gly Glu Phe Lys Phe Asp His Val Phe Ala Ser His Cys Thr Asn Leu			
165	170	175	
Glu Val Tyr Glu Arg Thr Ser Lys Pro Met Ile Asp Lys Leu Leu Met			
180	185	190	
Gly Phe Asn Ala Thr Ile Phe Ala Tyr Gly Met Thr Gly Ser Gly Lys			
195	200	205	
Thr Phe Thr Met Ser Gly Asn Glu Gln Glu Leu Gly Leu Ile Pro Leu			
210	215	220	
Ser Val Ser Tyr Leu Phe Thr Asn Ile Met Glu Gln Ser Met Asn Gly			
225	230	235	240
Asp Lys Lys Phe Asp Val Ile Ile Ser Tyr Leu Glu Ile Tyr Asn Glu			
245	250	255	
Arg Ile Tyr Asp Leu Leu Glu Ser Gly Leu Glu Glu Ser Gly Ser Arg			
260	265	270	
Ile Ser Thr Pro Ser Arg Leu Tyr Met Ser Lys Ser Asn Ser Asn Gly			
275	280	285	
Leu Gly Val Glu Leu Lys Ile Arg Asp Asp Ser Gln Tyr Gly Val Lys			
290	295	300	

Val Ile Gly Leu Thr Glu Arg Arg Cys Glu Ser Ser Glu Glu Leu Leu  
 305 310 315 320  
 Arg Trp Ile Ala Val Gly Asp Lys Ser Arg Lys Ile Gly Glu Thr Asp  
 325 330 335  
 Tyr Asn Ala Arg Ser Ser Arg Ser His Ala Ile Val Leu Ile Arg Leu  
 340 345 350  
 Thr Ser Thr Asn Val Lys Asn Gly Thr Ser Arg Ser Ser Thr Leu Ser  
 355 360 365  
 Leu Cys Asp Leu Ala Gly Ser Glu Arg Ala Thr Gly Gln Gln Glu Arg  
 370 375 380  
 Arg Lys Glu Gly Ser Phe Ile Asn Lys Ser Leu Leu Ala Leu Gly Thr  
 385 390 395 400  
 Val Ile Ser Lys Leu Ser Ala Asp Lys Met Asn Ser Val Gly Ser Asn  
 405 410 415  
 Ile Pro Ser Pro Ser Ala Ser Gly Ser Ser Ser Ser Gly Asn Ala  
 420 425 430  
 Thr Asn Asn Gly Thr Ser Pro Ser Asn His Ile Pro Tyr Arg Asp Ser  
 435 440 445  
 Lys Leu Thr Arg Leu Leu Gln Pro Ala Leu Ser Gly Asp Ser Ile Val  
 450 455 460  
 Thr Thr Ile Cys Thr Val Asp Thr Arg Asn Asp Ala Ala Ala Glu Thr  
 465 470 475 480  
 Met Asn Thr Leu Arg Phe Ala Ser Arg Ala Lys Asn Val Ala Leu His  
 485 490 495  
 Val Ser Lys Lys Ser Ile Ile Ser Asn Gly Asn Asn Asp Gly Asp Lys  
 500 505 510  
 Asp Arg Thr Ile Glu Leu Leu Arg Arg Gln Leu Glu Glu Gln Arg Arg  
 515 520 525  
 Met Ile Ser Glu Leu Lys Asn Arg Ser Asn Ile Gly Glu Pro Leu Thr  
 530 535 540  
 Lys Ser Ser Asn Glu Ser Thr Tyr Lys Asp Ile Lys Ala Thr Gly Asn  
 545 550 555 560  
 Asp Gly Asp Pro Asn Leu Ala Leu Met Arg Ala Glu Asn Arg Val Leu  
 565 570 575  
 Lys Tyr Lys Leu Glu Asn Cys Glu Lys Leu Leu Asp Lys Asp Val Val  
 580 585 590  
 Asp Leu Gln Asp Ser Glu Ile Met Glu Ile Val Glu Met Leu Pro Phe  
 595 600 605  
 Glu Val Gly Thr Leu Leu Glu Thr Lys Phe Gln Gly Leu Glu Ser Gln  
 610 615 620  
 Ile Arg Gln Tyr Arg Lys Tyr Thr Gln Lys Leu Glu Asp Lys Ile Met  
 625 630 635 640  
 Ala Leu Glu Lys Ser Gly His Thr Ala Met Ser Leu Thr Gly Cys Asp  
 645 650 655  
 Gly Thr Glu Val Ile Glu Leu Gln Lys Met Leu Glu Arg Lys Asp Lys  
 660 665 670  
 Met Ile Glu Ala Leu Gln Ser Ala Lys Arg Leu Arg Asp Arg Ala Leu  
 675 680 685  
 Lys Pro Leu Ile Asn Thr Gln Gln Ser Pro His Pro Val Val Asp Asn  
 690 695 700  
 Asp Lys  
 705

<210> 30  
 <211> 540  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 30  
 Met Ser Asn Met Ser Gln Asp Asp Val Thr Thr Gly Leu Arg Thr Val  
 1 5 10 15  
 Gln Gln Gly Leu Glu Ala Leu Arg Glu Glu His Ser Thr Ile Ser Asn

20	25	30	
Thr Leu Glu Thr Ser Val Lys Gly Val Lys Glu Asp Glu Ala Pro Leu			
35	40	45	
Pro Lys Gln Lys Leu Ser Gln Ile Asn Asp Asn Leu Asp Lys Leu Val			
50	55	60	
Cys Gly Val Asp Glu Thr Ser Leu Met Leu Met Val Phe Gln Leu Thr			
65	70	75	80
Gln Gly Met Asp Ala Gln His Gln Lys Tyr Gln Ala Gln Arg Arg Arg			
85	90	95	
Leu Cys Gln Glu Asn Ala Trp Leu Arg Asp Glu Leu Ser Ser Thr Gln			
100	105	110	
Ile Lys Leu Gln Gln Ser Glu Gln Met Val Ala Gln Leu Glu Glu Glu			
115	120	125	
Asn Lys His Leu Lys Tyr Met Ala Ser Ile Lys Gln Leu Asp Asp Gly			
130	135	140	
Thr Gln Ser Asp Thr Lys Thr Ser Val Asp Val Gly Pro Gln Pro Val			
145	150	155	160
Thr Asn Glu Thr Leu Gln Glu Leu Gly Phe Gly Pro Glu Asp Glu Glu			
165	170	175	
Asp Met Asn Ala Ser Gln Phe Asn Gln Pro Thr Pro Ala Asn Gln Met			
180	185	190	
Ala Ala Ser Ala Asn Val Gly Tyr Glu Ile Pro Ala Arg Leu Arg Thr			
195	200	205	
Leu His Asn Leu Val Ile Gln Tyr Ala Ser Gln Gly Arg Tyr Glu Val			
210	215	220	
Ala Val Pro Leu Cys Lys Gln Ala Leu Glu Asp Leu Glu Lys Thr Ser			
225	230	235	240
Gly His Asp His Pro Asp Val Ala Thr Met Leu Asn Ile Leu Ala Leu			
245	250	255	
Val Tyr Arg Asp Gln Asn Lys Tyr Lys Glu Ala Ala Asn Leu Leu Asn			
260	265	270	
Glu Ala Leu Ser Ile Arg Glu Lys Cys Leu Gly Glu Ser His Pro Ala			
275	280	285	
Val Ala Ala Thr Leu Asn Asn Leu Ala Val Leu Phe Gly Lys Arg Gly			
290	295	300	
Lys Phe Lys Asp Ala Glu Pro Leu Cys Lys Arg Ala Leu Glu Ile Arg			
305	310	315	320
Glu Lys Val Leu Gly Asp Asp His Pro Asp Val Ala Lys Gln Leu Asn			
325	330	335	
Asn Leu Ala Leu Cys Gln Asn Gln Gly Lys Tyr Glu Glu Val Glu			
340	345	350	
Lys Tyr Tyr Lys Arg Ala Leu Glu Ile Tyr Glu Ser Lys Leu Gly Pro			
355	360	365	
Asp Asp Pro Asn Val Ala Lys Thr Lys Asn Asn Leu Ser Ser Ala Tyr			
370	375	380	
Leu Lys Gln Gly Lys Tyr Lys Glu Ala Glu Glu Leu Tyr Lys Gln Ile			
385	390	395	400
Leu Thr Arg Ala His Glu Arg Glu Phe Gly Gln Ile Ser Gly Glu Asn			
405	410	415	
Lys Pro Ile Trp Gln Ile Ala Glu Glu Arg Glu Glu Asn Lys His Lys			
420	425	430	
Gly Glu Gly Ala Thr Ala Asn Glu Gln Ala Gly Trp Ala Lys Ala Ala			
435	440	445	
Lys Val Asp Ser Pro Thr Val Thr Thr Leu Lys Asn Leu Gly Ala			
450	455	460	
Leu Tyr Arg Arg Gln Gly Lys Tyr Glu Ala Ala Glu Thr Leu Glu Asp			
465	470	475	480
Val Ala Leu Arg Ala Lys Lys Gln His Glu Pro Leu Arg Ser Gly Ala			
485	490	495	
Met Gly Gly Ile Asp Glu Met Ser Gln Ser Met Met Ala Ser Thr Ile			
500	505	510	
Gly Gly Ser Arg Asn Ser Met Thr Thr Ser Thr Ser Gln Thr Gly Leu			
515	520	525	

Lys Asn Lys Leu Met Asn Ala Leu Gly Phe Asn Ser  
530 535 540

<210> 31  
<211> 508  
<212> PRT  
<213> Drosophila melanogaster

<400> 31  
Met Thr Gln Met Ser Gln Asp Glu Ile Ile Thr Asn Thr Lys Thr Val  
1 5 10 15  
Leu Gln Gly Leu Glu Ala Leu Arg Val Glu His Val Ser Ile Met Asn  
20 25 30  
Gly Ile Ala Glu Val Gln Lys Asp Asn Glu Lys Ser Asp Met Leu Arg  
35 40 45  
Lys Asn Ile Glu Asn Ile Glu Leu Gly Leu Ser Glu Ala Gln Val Met  
50 55 60  
Met Ala Leu Thr Ser His Leu Gln Asn Ile Glu Ala Glu Lys His Lys  
65 70 75 80  
Leu Lys Thr Gln Val Arg Arg Leu His Gln Glu Asn Ala Trp Leu Arg  
85 90 95  
Asp Glu Leu Ala Asn Thr Gln Gln Lys Phe Gln Ala Ser Glu Gln Leu  
100 105 110  
Val Ala Gln Leu Glu Glu Glu Lys Lys His Leu Glu Phe Met Ala Ser  
115 120 125  
Val Lys Lys Tyr Asp Glu Asn Gln Glu Gln Asp Asp Ala Cys Asp Lys  
130 135 140  
Ser Arg Thr Asp Pro Val Val Glu Leu Phe Pro Asp Glu Glu Asn Glu  
145 150 155 160  
Asp Arg His Asn Met Ser Pro Thr Pro Pro Ser Gln Phe Ala Asn Gln  
165 170 175  
Thr Ser Gly Tyr Glu Ile Pro Ala Arg Leu Arg Thr Leu His Asn Leu  
180 185 190  
Val Ile Gln Tyr Ala Ser Gln Gly Arg Tyr Glu Val Ala Val Pro Leu  
195 200 205  
Cys Lys Gln Ala Leu Glu Asp Leu Glu Arg Thr Ser Gly His Asp His  
210 215 220  
Pro Asp Val Ala Thr Met Leu Asn Ile Leu Ala Leu Val Tyr Arg Asp  
225 230 235 240  
Gln Asn Lys Tyr Lys Glu Ala Ala Asn Leu Leu Asn Asp Ala Leu Ser  
245 250 255  
Ile Arg Gly Lys Thr Leu Gly Glu Asn His Pro Ala Val Ala Ala Thr  
260 265 270  
Leu Asn Asn Leu Ala Val Leu Tyr Gly Lys Arg Gly Lys Tyr Lys Asp  
275 280 285  
Ala Glu Pro Leu Cys Lys Arg Ala Leu Glu Ile Arg Glu Lys Val Leu  
290 295 300  
Gly Lys Asp His Pro Asp Val Ala Lys Gln Leu Asn Asn Leu Ala Leu  
305 310 315 320  
Leu Cys Gln Asn Gln Gly Lys Tyr Asp Glu Val Glu Lys Tyr Tyr Gln  
325 330 335  
Arg Ala Leu Asp Ile Tyr Glu Ser Lys Leu Gly Pro Asp Asp Pro Asn  
340 345 350  
Val Ala Lys Thr Lys Asn Asn Leu Ala Gly Cys Tyr Leu Lys Gln Gly  
355 360 365  
Arg Tyr Thr Glu Ala Glu Ile Leu Tyr Lys Gln Val Leu Thr Arg Ala  
370 375 380  
His Glu Arg Glu Phe Gly Ala Ile Asp Ser Lys Asn Lys Pro Ile Trp  
385 390 395 400  
Gln Val Ala Glu Glu Arg Glu Glu His Lys Phe Asp Asn Arg Glu Asn  
405 410 415  
Thr Pro Tyr Gly Glu Tyr Gly Trp His Lys Ala Ala Lys Val Asp

420	425	430	
Ser Pro Thr Val Thr Thr Leu Lys Asn Leu Gly Ala	Leu Tyr Arg		
435	440	445	
Arg Gln Gly Met Phe Glu Ala Ala Glu Thr Leu Glu Asp	Cys Ala Met		
450	455	460	
Arg Ser Lys Lys Glu Ala Tyr Asp Leu Ala Lys Gln Thr Lys Leu Ser			
465	470	475	480
Gln Leu Leu Thr Ser Asn Glu Lys Arg Arg Ser Lys Ala Ile Lys Glu			
485	490	495	
Asp Leu Asp Phe Ser Glu Glu Lys Asn Ala Lys Pro			
500	505		

<210> 32  
<211> 571  
<212> PRT  
<213> Loligo pealeii

<400> 32			
Met Glu Val Thr Gln Thr Val Lys Ser Tyr Arg Ile Lys Lys Ile Glu			
1	5	10	15
Glu Ile Gly Lys Met Thr Ala Leu Ser Gln Glu Glu Ile Ile Ser Asn			
20	25	30	
Thr Lys Thr Val Ile Gln Gly Leu Asp Thr Leu Lys Asn Glu His Asn			
35	40	45	
Gln Ile Leu Asn Ser Leu Leu Thr Ser Met Lys Thr Ile Arg Lys Glu			
50	55	60	
Asn Gly Asp Thr Asn Leu Val Glu Glu Lys Ala Asn Ile Leu Lys Lys			
65	70	75	80
Ser Val Asp Ser Ile Glu Leu Gly Leu Gly Glu Ala Gln Val Met Met			
85	90	95	
Ala Leu Ala Asn His Leu Gln His Thr Glu Ala Glu Lys Gln Lys Leu			
100	105	110	
Arg Ala Gln Val Arg Arg Leu Cys Gln Glu Asn Ala Trp Leu Arg Asp			
115	120	125	
Glu Leu Ala Asn Thr Gln Gln Lys Leu Gln Met Ser Glu Gln Lys Val			
130	135	140	
Ala Thr Ile Glu Glu Lys Lys His Leu Glu Phe Met Asn Glu Met			
145	150	155	160
Lys Lys Tyr Asp Thr Asn Glu Ala Gln Val Asn Glu Glu Lys Glu Ser			
165	170	175	
Glu Gln Ser Ser Leu Asp Leu Gly Phe Pro Asp Asp Asp Asp Gly			
180	185	190	
Gly Gln Pro Glu Val Leu Ser Pro Thr Gln Pro Ser Ala Met Ala Gln			
195	200	205	
Ala Ala Ser Gly Gly Cys Glu Ile Pro Ala Arg Leu Arg Thr Leu His			
210	215	220	
Asn Leu Val Ile Gln Tyr Ala Ser Gln Gly Arg Tyr Glu Val Ala Val			
225	230	235	240
Pro Leu Cys Lys Gln Ala Leu Glu Asp Leu Glu Lys Thr Ser Gly His			
245	250	255	
Asp His Pro Asp Val Ala Thr Met Leu Asn Ile Leu Ala Leu Val Tyr			
260	265	270	
Arg Asp Gln Gly Lys Tyr Lys Glu Ala Ala Asn Leu Leu Asn Asp Ala			
275	280	285	
Leu Gly Ile Arg Glu Lys Thr Leu Gly Pro Asp His Pro Ala Val Ala			
290	295	300	
Ala Thr Leu Asn Asn Leu Ala Val Leu Tyr Gly Lys Arg Gly Lys Tyr			
305	310	315	320
Lys Asp Ala Glu Pro Leu Cys Lys Arg Ala Leu Val Ile Arg Glu Lys			
325	330	335	
Val Leu Gly Lys Asp His Pro Asp Val Ala Lys Gln Leu Asn Asn Leu			
340	345	350	

Ala	Leu	Leu	Cys	Gln	Asn	Gln	Gly	Lys	Tyr	Glu	Glu	Val	Glu	Arg	Tyr
355							360					365			
Tyr	Gln	Arg	Ala	Leu	Glu	Ile	Tyr	Gln	Lys	Glu	Leu	Gly	Pro	Asp	Asp
370						375					380				
Pro	Asn	Val	Ala	Lys	Thr	Lys	Asn	Asn	Leu	Ala	Ser	Ala	Tyr	Leu	Lys
385						390				395				400	
Gln	Gly	Lys	Tyr	Lys	Gln	Ala	Glu	Ile	Leu	Tyr	Lys	Glu	Val	Leu	Thr
								405		410				415	
Arg	Ala	His	Glu	Lys	Glu	Phe	Gly	Lys	Val	Asp	Asp	Asp	Asn	Lys	Pro
								420		425				430	
Ile	Trp	Met	Gln	Ala	Glu	Glu	Arg	Glu	Glu	Asn	Lys	Ala	Lys	Tyr	Lys
							435		440				445		
Asp	Gly	Ala	Pro	Gln	Pro	Asp	Tyr	Gly	Ser	Trp	Leu	Lys	Ala	Val	Lys
							450		455			460			
Val	Asp	Ser	Pro	Thr	Val	Thr	Thr	Leu	Lys	Asn	Leu	Gly	Ala	Leu	
465						470			475					480	
Tyr	Arg	Arg	Gln	Gly	Lys	Tyr	Glu	Ala	Ala	Glu	Thr	Leu	Glu	Glu	Cys
							485			490				495	
Ala	Leu	Arg	Ser	Arg	Lys	Ser	Ala	Leu	Glu	Val	Val	Arg	Gln	Thr	Lys
							500			505				510	
Ile	Ser	Asp	Val	Leu	Gly	Ser	Asp	Phe	Ser	Lys	Gly	Gln	Ser	Pro	Lys
							515			520				525	
Asp	Arg	Lys	Arg	Ser	Asn	Ser	Arg	Asp	Arg	Asn	Arg	Arg	Asp	Ser	Met
							530			535				540	
Asp	Ser	Val	Ser	Tyr	Glu	Lys	Ser	Gly	Asp	Gly	Asp	Glu	His	Glu	Lys
						545			550			555			560
Ser	Lys	Leu	His	Val	Gly	Thr	Ser	His	Lys	Gln					
						565						570			

<210> 33  
 <211> 686  
 <212> PRT  
 <213> Strongylocentrotus purpuratus

<400> 33																
Met	Ser	Gly	Ser	Lys	Leu	Ser	Thr	Pro	Asn	Asn	Ser	Gly	Gly	Gly	Gln	
1					5				10						15	
Gly	Asn	Leu	Ser	Gln	Glu	Gln	Ile	Ile	Thr	Gly	Thr	Arg	Glu	Val	Ile	
							20		25						30	
Lys	Gly	Leu	Glu	Gln	Leu	Lys	Asn	Glu	His	Asn	Asp	Ile	Leu	Asn	Ser	
							35		40						45	
Leu	Tyr	Gln	Ser	Leu	Lys	Met	Leu	Lys	Lys	Asp	Thr	Pro	Gly	Asp	Ser	
						50			55			60				
Asn	Leu	Val	Glu	Lys	Thr	Asp	Ile	Ile	Glu	Lys	Ser	Leu	Glu	Ser		
						65			70			75			80	
Leu	Glu	Leu	Gly	Leu	Gly	Glu	Ala	Lys	Val	Met	Met	Ala	Leu	Gly	His	
							85			90				95		
His	Leu	Asn	Met	Val	Glu	Ala	Glu	Lys	Gln	Lys	Leu	Arg	Ala	Gln	Val	
							100			105				110		
Arg	Arg	Leu	Val	Gln	Glu	Asn	Thr	Trp	Leu	Arg	Asp	Glu	Leu	Ala	Ala	
							115			120				125		
Thr	Gln	Gln	Lys	Leu	Gln	Thr	Ser	Glu	Gln	Asn	Leu	Ala	Asp	Leu	Glu	
							130			135				140		
Val	Lys	Tyr	Lys	His	Leu	Glu	Tyr	Met	Asn	Ser	Ile	Lys	Lys	Tyr	Asp	
							145			150				155		160
Glu	Asp	Arg	Thr	Pro	Asp	Glu	Glu	Ala	Ser	Ser	Ser	Asp	Pro	Leu	Asp	
								165			170				175	
Leu	Gly	Phe	Pro	Glu	Asp	Asp	Asp	Gly	Gly	Gln	Ala	Asp	Glu	Ser	Tyr	
								180			185				190	
Pro	Gln	Pro	Gln	Thr	Gly	Ser	Gly	Ser	Val	Ser	Ala	Ala	Ala	Gly	Gly	
								195			200				205	
Tyr	Glu	Ile	Pro	Ala	Arg	Leu	Arg	Thr	Leu	His	Asn	Leu	Val	Ile	Gln	

210	215	220
Tyr Ala Ser Gln Ser Arg Tyr Glu Val Ala Val	Pro Leu Cys Lys Gln	
225	230	235
Ala Leu Glu Asp Leu Glu Lys Thr Ser Gly His Asp His	Pro Asp Val	240
245	250	255
Ala Thr Met Leu Asn Ile Leu Ala Leu Val	Tyr Arg Asp Gln Asn Lys	
260	265	270
Tyr Lys Glu Ala Gly Asn Leu Leu His Asp Ala Leu	Ile Arg Glu	
275	280	285
Lys Thr Leu Gly Pro Asp His Pro Ala Val Ala Ala	Thr Leu Asn Asn	
290	295	300
Leu Ala Val Leu Tyr Gly Lys Arg Gly Lys Tyr Lys	Glu Ala Glu Pro	
305	310	315
Leu Cys Lys Arg Ala Leu Glu Ile Arg Glu Lys Val	Leu Gly Lys Asp	320
325	330	335
His Pro Asp Val Ala Lys Gln Leu Asn Asn Leu Ala	Leu Cys Gln	
340	345	350
Asn Gln Gly Lys Tyr Glu Glu Val Glu Trp Tyr Tyr	Gln Arg Ala Leu	
355	360	365
Glu Ile Tyr Glu Lys Lys Leu Gly Pro Asp Asp	Pro Asn Val Ala Lys	
370	375	380
Thr Lys Asn Asn Leu Ala Ala Tyr Leu Lys Gln Gly	Lys Tyr Lys	
385	390	395
Ala Ala Glu Thr Leu Tyr Lys Gln Val Leu Thr Arg	Ala His Glu Arg	
405	410	415
Glu Phe Gly Leu Ser Ala Asp Asp Lys Asp Asn Lys	Pro Ile Trp Met	
420	425	430
Gln Ala Glu Glu Arg Glu Glu Lys Gly Lys Phe	Lys Asp Asn Ala Pro	
435	440	445
Tyr Gly Asp Tyr Gly Gly Trp His Lys Ala Ala Lys	Val Asp Ser Arg	
450	455	460
Ser Arg Ser Ser Pro Thr Val Thr Thr Leu Lys Asn	Leu Gly Ala	
465	470	475
Leu Tyr Arg Arg Gln Gly Lys Tyr Asp Ala Ala Glu	Ile Leu Glu Glu	
485	490	495
Cys Ala Met Lys Ser Arg Arg Asn Ala Leu Asp Met	Val Arg Glu Thr	
500	505	510
Lys Val Arg Glu Leu Leu Gly Gln Asp Leu Ser Thr	Asp Val Pro Arg	
515	520	525
Ser Glu Ala Met Ala Lys Glu Arg His His Arg Arg	Ser Ser Gly Thr	
530	535	540
Pro Arg His Gly Ser Thr Glu Ser Val Ser Tyr Glu	Lys Thr Asp Gly	
545	550	555
Ser Glu Glu Val Ser Ile Gly Val Ala Trp Lys Ala	Lys Arg Lys Ala	560
565	570	575
Lys Asp Arg Ser Arg Ser Ile Pro Ala Gly Tyr Val	Glu Ile Pro Arg	
580	585	590
Ser Pro Pro His Val Leu Val Glu Asn Gly Asp Gly	Lys Leu Arg Arg	
595	600	605
Ser Gly Ser Leu Ser Lys Leu Arg Ala Ser Val Arg	Arg Ser Ser Thr	
610	615	620
Lys Leu Leu Asn Lys Leu Lys Gly Arg Glu Ser Asp	Asp Asp Gly Gly	
625	630	635
Met Lys Arg Ala Ser Ser Met Ser Val Leu Pro Ser	Arg Gly Asn Asp	640
645	650	655
Glu Ser Thr Pro Ala Pro Ile Gln Leu Ser Gln Arg	Gly Arg Val Gly	
660	665	670
Ser His Asp Asn Leu Ser Ser Arg Arg Gln Ser Gly	Asn Phe	
675	680	685

<210> 34  
<211> 452

<212> PRT

<213> Gallus gallus

<400> 34

Met Arg Arg Ala Leu Gly Thr Leu Gly Cys Cys Leu Ala Leu Leu Leu  
1 5 10 15  
Pro Leu Leu Pro Ala Ala Arg Gly Val Pro His Arg His Arg Arg Gln  
20 25 30  
Pro Leu Gly Ser Gly Leu Gly Arg His Gly Ala Ala Asp Thr Ala Cys  
35 40 45  
Lys Asn Arg Pro Leu Asp Leu Val Phe Ile Ile Asp Ser Ser Arg Ser  
50 55 60  
Val Arg Pro Glu Glu Phe Glu Lys Val Lys Ile Phe Leu Ser Lys Met  
65 70 75 80  
Ile Asp Thr Leu Asp Val Gly Glu Arg Thr Thr Arg Val Ala Val Met  
85 90 95  
Asn Tyr Ala Ser Thr Val Lys Val Glu Phe Pro Leu Arg Thr Tyr Phe  
100 105 110  
Asp Lys Ala Ser Met Lys Glu Ala Val Ser Arg Ile Gln Pro Leu Ser  
115 120 125  
Ala Gly Thr Met Thr Gly Leu Ala Ile Gln Ala Ala Met Asp Glu Val  
130 135 140  
Phe Thr Glu Glu Met Gly Thr Arg Pro Ala Asn Phe Asn Ile Pro Lys  
145 150 155 160  
Val Val Ile Ile Val Thr Asp Gly Arg Pro Gln Asp Gln Val Glu Asn  
165 170 175  
Val Ala Ala Asn Ala Arg Thr Ala Gly Ile Glu Ile Tyr Ala Val Gly  
180 185 190  
Val Gly Arg Ala Asp Met Gln Ser Leu Arg Ile Met Ala Ser Glu Pro  
195 200 205  
Leu Asp Glu His Val Phe Tyr Val Glu Thr Tyr Gly Val Ile Glu Lys  
210 215 220  
Leu Thr Ser Lys Phe Arg Glu Thr Phe Cys Ala Ala Asn Thr Cys Ala  
225 230 235 240  
Leu Gly Thr His Asp Cys Glu Gln Val Cys Val Ser Asn Asp Gly Ser  
245 250 255  
Tyr Leu Cys Asp Cys Tyr Glu Gly Tyr Thr Leu Asn Pro Asp Lys Arg  
260 265 270  
Thr Cys Ser Ala Val Asp Val Cys Ala Pro Gly Arg His Glu Cys Asp  
275 280 285  
Gln Ile Cys Val Ser Asn Asn Gly Ser Tyr Val Cys Glu Cys Phe Glu  
290 295 300  
Gly Tyr Thr Leu Asn Pro Asp Lys Lys Thr Cys Ser Ala Met Asp Val  
305 310 315 320  
Cys Ala Pro Gly Arg His Asp Cys Ala Gln Val Cys Arg Arg Asn Gly  
325 330 335  
Gly Ser Tyr Ser Cys Asp Cys Phe Glu Gly Phe Thr Leu Asn Pro Asp  
340 345 350  
Lys Lys Thr Cys Ser Ala Val Asp Val Cys Ala Pro Gly Arg His Asp  
355 360 365  
Cys Glu Gln Val Cys Val Arg Asp Asp Leu Phe Tyr Thr Cys Asp Cys  
370 375 380  
Tyr Gln Gly Tyr Val Leu Asn Pro Asp Lys Lys Thr Cys Ser Arg Ala  
385 390 395 400  
Thr Thr Ser Ser Leu Val Thr Asp Glu Glu Ala Cys Lys Cys Glu Ala  
405 410 415  
Ile Ala Ala Leu Gln Asp Ser Val Thr Ser Arg Leu Glu Ala Leu Ser  
420 425 430  
Thr Lys Leu Asp Glu Val Ser Gln Lys Leu Gln Ala Tyr Gln Asp Arg  
435 440 445  
Gln Gln Val Val  
450

<210> 35  
<211> 486  
<212> PRT  
<213> Homo sapiens

<400> 35  
Met Pro Arg Pro Ala Pro Ala Arg Arg Leu Pro Gly Leu Leu Leu  
1 5 10 15  
Leu Trp Pro Leu Leu Leu Pro Ser Ala Ala Pro Asp Pro Val Ala  
20 25 30  
Arg Pro Gly Phe Arg Arg Leu Glu Thr Arg Gly Pro Gly Gly Ser Pro  
35 40 45  
Gly Arg Arg Pro Ser Pro Ala Ala Pro Asp Gly Ala Pro Ala Ser Gly  
50 55 60  
Thr Ser Glu Pro Gly Arg Ala Arg Gly Ala Gly Val Cys Lys Ser Arg  
65 70 75 80  
Pro Leu Asp Leu Val Phe Ile Ile Asp Ser Ser Arg Ser Val Arg Pro  
85 90 95  
Leu Glu Phe Thr Lys Val Lys Thr Phe Val Ser Arg Ile Ile Asp Thr  
100 105 110  
Leu Asp Ile Gly Pro Ala Asp Thr Arg Val Ala Val Val Asn Tyr Ala  
115 120 125  
Ser Thr Val Lys Ile Glu Phe Gln Leu Gln Ala Tyr Thr Asp Lys Gln  
130 135 140  
Ser Leu Lys Gln Ala Val Gly Arg Ile Thr Pro Leu Ser Thr Gly Thr  
145 150 155 160  
Met Ser Gly Leu Ala Ile Gln Thr Ala Met Asp Glu Ala Phe Thr Val  
165 170 175  
Glu Ala Gly Ala Arg Glu Pro Ser Ser Asn Ile Pro Lys Val Ala Ile  
180 185 190  
Ile Val Thr Asp Gly Arg Pro Gln Asp Gln Val Asn Glu Val Ala Ala  
195 200 205  
Arg Ala Gln Ala Ser Gly Ile Glu Leu Tyr Ala Val Gly Val Asp Arg  
210 215 220  
Ala Asp Met Ala Ser Leu Lys Met Met Ala Ser Glu Pro Leu Glu Glu  
225 230 235 240  
His Val Phe Tyr Val Glu Thr Tyr Gly Val Ile Glu Lys Leu Ser Ser  
245 250 255  
Arg Phe Gln Glu Thr Phe Cys Ala Leu Asp Pro Cys Val Leu Gly Thr  
260 265 270  
His Gln Cys Gln His Val Cys Ile Ser Asp Gly Glu Gly Lys His His  
275 280 285  
Cys Glu Cys Ser Gln Gly Tyr Thr Leu Asn Ala Asp Lys Lys Thr Cys  
290 295 300  
Ser Ala Leu Asp Arg Cys Ala Leu Asn Thr His Gly Cys Glu His Ile  
305 310 315 320  
Cys Val Asn Asp Arg Ser Gly Ser Tyr His Cys Glu Cys Tyr Glu Gly  
325 330 335  
Tyr Thr Leu Asn Glu Asp Arg Lys Thr Cys Ser Ala Gln Asp Lys Cys  
340 345 350  
Ala Leu Gly Thr His Gly Cys Gln His Ile Cys Val Asn Asp Arg Thr  
355 360 365  
Gly Ser His His Cys Glu Cys Tyr Glu Gly Tyr Thr Leu Asn Ala Asp  
370 375 380  
Lys Lys Thr Cys Ser Val Arg Asp Lys Cys Ala Leu Gly Ser His Gly  
385 390 395 400  
Cys Gln His Ile Cys Val Ser Asp Gly Ala Ala Ser Tyr His Cys Asp  
405 410 415  
Cys Tyr Pro Gly Tyr Thr Leu Asn Glu Asp Lys Lys Thr Cys Ser Ala  
420 425 430  
Thr Glu Glu Ala Arg Arg Leu Val Ser Thr Glu Asp Ala Cys Gly Cys  
435 440 445  
Glu Ala Thr Leu Ala Phe Gln Asp Lys Val Ser Ser Tyr Leu Gln Arg

450	455	460
Leu Asn Thr Lys Leu Asp Asp Ile Leu Glu Lys Leu Lys Ile Asn Glu		
465	470	475
Tyr Gly Gln Ile His Arg		
485		

<210> 36  
<211> 481  
<212> PRT  
<213> Mus musculus

<400> 36		
Met Leu Leu Ser Ala Pro Leu Arg His Leu Pro Gly Leu Leu Leu		
1 5 10 15		
Leu Trp Pro Leu Leu Leu Pro Ser Leu Ala Ala Pro Gly Arg Leu		
20 25 30		
Ala Arg Ala Ser Val Arg Arg Leu Gly Thr Arg Val Pro Gly Gly Ser		
35 40 45		
Pro Gly His Leu Ser Ala Leu Ala Thr Ser Thr Arg Ala Pro Tyr Ser		
50 55 60		
Gly Gly Arg Gly Ala Gly Val Cys Lys Ser Arg Pro Leu Asp Leu Val		
65 70 75 80		
Phe Ile Ile Asp Ser Ser Arg Ser Val Arg Pro Leu Glu Phe Thr Lys		
85 90 95		
Val Lys Thr Phe Val Ser Arg Ile Ile Asp Thr Leu Asp Ile Gly Ala		
100 105 110		
Thr Asp Thr Arg Val Ala Val Val Asn Tyr Ala Ser Thr Val Lys Ile		
115 120 125		
Glu Phe Gln Leu Asn Thr Tyr Ser Asp Lys Gln Ala Leu Lys Gln Ala		
130 135 140		
Val Ala Arg Ile Thr Pro Leu Ser Thr Gly Thr Met Ser Gly Leu Ala		
145 150 155 160		
Ile Gln Thr Ala Met Glu Glu Ala Phe Thr Val Glu Ala Gly Ala Arg		
165 170 175		
Gly Pro Met Ser Asn Ile Pro Lys Val Ala Ile Ile Val Thr Asp Gly		
180 185 190		
Arg Pro Gln Asp Gln Val Asn Glu Val Ala Ala Arg Ala Arg Ala Ser		
195 200 205		
Gly Ile Glu Leu Tyr Ala Val Gly Val Asp Arg Ala Asp Met Glu Ser		
210 215 220		
Leu Lys Met Met Ala Ser Lys Pro Leu Glu Glu His Val Phe Tyr Val		
225 230 235 240		
Glu Thr Tyr Gly Val Ile Glu Lys Leu Ser Ala Arg Phe Gln Glu Thr		
245 250 255		
Phe Cys Ala Leu Asp Gln Cys Met Leu Gly Thr His Gln Cys Gln His		
260 265 270		
Val Cys Val Ser Asp Gly Asp Gly Lys His His Cys Glu Cys Ser Gln		
275 280 285		
Gly Tyr Thr Leu Asn Ala Asp Gly Lys Thr Cys Ser Ala Ile Asp Lys		
290 295 300		
Cys Ala Leu Ser Thr His Gly Cys Glu Gln Ile Cys Ile Asn Asp Arg		
305 310 315 320		
Asn Gly Ser Tyr His Cys Glu Cys Tyr Gly Gly Tyr Ala Leu Asn Ala		
325 330 335		
Asp Arg Arg Thr Cys Ala Ala Leu Asp Lys Cys Ala Ser Gly Thr His		
340 345 350		
Gly Cys Gln His Ile Cys Val Asn Asp Gly Ala Gly Ser His His Cys		
355 360 365		
Glu Cys Phe Glu Gly Tyr Thr Leu Asn Ala Asp Lys Lys Thr Cys Ser		
370 375 380		
Val Arg Asn Lys Cys Ala Leu Gly Thr His Gly Cys Gln His Ile Cys		
385 390 395 400		

Val	Ser	Asp	Gly	Ala	Val	Ala	Tyr	His	Cys	Asp	Cys	Phe	Pro	Gly	Tyr
				405				410						415	
Thr	Leu	Asn	Asp	Asp	Lys	Lys	Thr	Cys	Ser	Asp	Ile	Glu	Glu	Ala	Arg
				420				425						430	
Ser	Leu	Ile	Ser	Ile	Glu	Asp	Ala	Cys	Gly	Cys	Gly	Ala	Thr	Leu	Ala
				435				440					445		
Phe	Gln	Glu	Lys	Val	Ser	Ser	His	Leu	Gln	Lys	Leu	Asn	Thr	Lys	Leu
				450				455					460		
Asp	Asn	Ile	Leu	Lys	Lys	Leu	Lys	Val	Thr	Glu	Tyr	Gly	Gln	Val	His
				465				470					475		480
Arg															

<210> 37

<211> 1507

<212> PRT

<213> Drosophila melanogaster

<400> 37

Met	Val	Ser	Leu	Ile	Asp	Thr	Ile	Glu	Ala	Ala	Glu	Lys	Gln	Lys		
1				5				10					15			
Gln	Ser	Gln	Ala	Val	Val	Thr	Asn	Thr	Ser	Ala	Ser	Ser	Ser	Cys		
				20				25					30			
Ser	Ser	Phe	Ser	Ser	Ser	Pro	Pro	Pro	Ser	Ser	Ser	Val	Gly	Ser	Pro	
				35				40					45			
Ser	Pro	Gly	Ala	Pro	Lys	Thr	Asn	Leu	Thr	Ala	Ser	Gly	Lys	Pro	Lys	
				50				55					60			
Glu	Lys	Arg	Arg	Asn	Asn	Glu	Lys	Arg	Lys	Glu	Lys	Ser	Arg	Asp	Ala	
				65				70					75		80	
Ala	Arg	Cys	Arg	Arg	Ser	Lys	Glu	Thr	Glu	Ile	Phe	Met	Glu	Leu	Ser	
				85				90					95			
Ala	Ala	Leu	Pro	Leu	Lys	Thr	Asp	Asp	Val	Asn	Gln	Leu	Asp	Lys	Ala	
				100				105					110			
Ser	Val	Met	Arg	Ile	Thr	Ile	Ala	Phe	Leu	Lys	Ile	Arg	Glu	Met	Leu	
				115				120					125			
Gln	Phe	Val	Pro	Ser	Leu	Arg	Asp	Cys	Asn	Asp	Asp	Ile	Lys	Gln	Asp	
				130				135					140			
Ile	Glu	Thr	Ala	Glu	Asp	Gln	Gln	Glu	Val	Lys	Pro	Lys	Leu	Glu	Val	
				145				150					155		160	
Gly	Thr	Glu	Asp	Trp	Leu	Asn	Gly	Ala	Glu	Ala	Arg	Glu	Leu	Lys		
				165				170					175			
Gln	Thr	Met	Asp	Gly	Phe	Leu	Leu	Val	Leu	Ser	His	Glu	Gly	Asp	Ile	
				180				185					190			
Thr	Tyr	Val	Ser	Glu	Asn	Val	Val	Glu	Tyr	Leu	Gly	Ile	Thr	Lys	Ile	
				195				200					205			
Asp	Thr	Leu	Gly	Gln	Gln	Ile	Trp	Glu	Tyr	Ser	His	Gln	Cys	Asp	His	
				210				215					220			
Ala	Glu	Ile	Lys	Glu	Ala	Leu	Ser	Leu	Lys	Arg	Glu	Leu	Ala	Gln	Lys	
				225				230					235		240	
Val	Lys	Asp	Glu	Pro	Gln	Gln	Asn	Ser	Gly	Val	Ser	Thr	His	His	Arg	
				245				250					255			
Asp	Leu	Phe	Val	Arg	Leu	Lys	Cys	Thr	Leu	Thr	Ser	Arg	Gly	Arg	Ser	
				260				265					270			
Ile	Asn	Ile	Lys	Ser	Ala	Ser	Tyr	Lys	Val	Ile	His	Ile	Thr	Gly	His	
				275				280					285			
Leu	Val	Val	Asn	Ala	Lys	Gly	Glu	Arg	Leu	Leu	Met	Ala	Ile	Gly	Arg	
				290				295					300			
Pro	Ile	Pro	His	Pro	Ser	Asn	Ile	Glu	Ile	Pro	Leu	Gly	Thr	Ser	Thr	
				305				310					315		320	
Phe	Leu	Thr	Lys	His	Ser	Leu	Asp	Met	Arg	Phe	Thr	Tyr	Val	Asp	Asp	
				325				330					335			
Lys	Met	His	Asp	Leu	Leu	Gly	Tyr	Ser	Pro	Lys	Asp	Leu	Leu	Asp	Thr	

340	345	350													
Ser	Leu	Phe	Ser	Cys	Gln	His	Gly	Ala	Asp	Ser	Glu	Arg	Leu	Met	Ala
355							360					365			
Thr	Phe	Lys	Ser	Val	Leu	Ser	Lys	Gly	Gln	Gly	Glu	Thr	Ser	Arg	Tyr
370							375					380			
Arg	Phe	Leu	Gly	Lys	Tyr	Gly	Tyr	Cys	Trp	Ile	Leu	Ser	Gln	Ala	
385							390					395			400
Thr	Ile	Val	Tyr	Asp	Lys	Leu	Lys	Pro	Gln	Ser	Val	Val	Cys	Val	Asn
															415
Tyr	Val	Ile	Ser	Asn	Leu	Glu	Asn	Lys	His	Glu	Ile	Tyr	Ser	Leu	Ala
															430
Gln	Gln	Thr	Ala	Ala	Ser	Glu	Gln	Lys	Glu	Gln	His	His	Gln	Ala	Ala
															445
Glu	Thr	Glu	Lys	Glu	Pro	Glu	Lys	Ala	Ala	Asp	Pro	Glu	Ile	Ile	Ala
															460
Gln	Glu	Thr	Lys	Glu	Thr	Val	Asn	Thr	Pro	Ile	His	Thr	Ser	Glu	Leu
															480
Gln	Ala	Lys	Pro	Leu	Gln	Leu	Glu	Ser	Glu	Lys	Ala	Glu	Lys	Thr	Ile
															495
Glu	Glu	Thr	Lys	Thr	Ile	Ala	Thr	Ile	Pro	Pro	Val	Thr	Ala	Thr	Ser
															510
Thr	Ala	Asp	Gln	Ile	Lys	Gln	Leu	Pro	Glu	Ser	Asn	Pro	Tyr	Lys	Gln
															525
Ile	Leu	Gln	Ala	Glu	Leu	Leu	Ile	Lys	Arg	Glu	Asn	His	Ser	Pro	Gly
															540
Pro	Arg	Thr	Ile	Thr	Ala	Gln	Leu	Leu	Ser	Gly	Ser	Ser	Ser	Gly	Leu
															560
Arg	Pro	Glu	Glu	Lys	Arg	Pro	Lys	Ser	Val	Thr	Ala	Ser	Val	Leu	Arg
															575
Pro	Ser	Pro	Ala	Pro	Pro	Leu	Thr	Pro	Pro	Pro	Thr	Ala	Val	Leu	Cys
															590
Lys	Lys	Thr	Pro	Leu	Gly	Val	Glu	Pro	Asn	Leu	Pro	Pro	Thr	Thr	Thr
															605
Ala	Thr	Ala	Ala	Ile	Ile	Ser	Ser	Ser	Asn	Gln	Gln	Leu	Gln	Ile	Ala
															620
Gln	Gln	Thr	Gln	Leu	Gln	Asn	Pro	Gln	Gln	Pro	Ala	Gln	Asp	Met	Ser
															640
Lys	Gly	Phe	Cys	Ser	Leu	Phe	Ala	Asp	Asp	Gly	Arg	Gly	Leu	Thr	Met
															655
Leu	Lys	Glu	Glu	Pro	Asp	Asp	Leu	Ser	His	His	Leu	Ala	Ser	Thr	Asn
															670
Cys	Ile	Gln	Leu	Asp	Glu	Met	Thr	Pro	Phe	Ser	Asp	Met	Leu	Val	Gly
															685
Leu	Met	Gly	Thr	Cys	Leu	Leu	Pro	Glu	Asp	Ile	Asn	Ser	Leu	Asp	Ser
															700
Thr	Thr	Cys	Ser	Thr	Thr	Ala	Ser	Gly	Gln	His	Tyr	Gln	Ser	Pro	Ser
															720
Ser	Ser	Ser	Thr	Ser	Ala	Pro	Ser	Asn	Thr	Ser	Ser	Ser	Asn	Asn	Ser
															735
Tyr	Ala	Asn	Ser	Pro	Leu	Ser	Pro	Leu	Thr	Pro	Asn	Ser	Thr	Ala	Thr
															750
Ala	Ser	Asn	Pro	Ser	His	Gln	Gln	Gln	Gln	His	His	Asn	Gln	Gln	
															765
Gln	His	His	Pro	Gln	His	His	Asp	Asn							
															780
Ser	Asn	Ser	Ser	Ser	Asn	Ile	Asp	Pro	Leu	Phe	Asn	Tyr	Arg	Glu	Glu
															800
Ser	Asn	Asp	Thr	Ser	Cys	Ser	Gln	His	Leu	His	Ser	Pro	Ser	Ile	Thr
															815
Ser	Lys	Ser	Pro	Glu	Asp	Ser	Ser	Leu	Pro	Ser	Leu	Cys	Ser	Pro	Asn
															830
Ser	Leu	Thr	Gln	Glu	Asp	Asp	Phe	Ser	Phe	Glu	Ala	Phe	Ala	Met	Arg
															845

Ala Pro Tyr Ile Pro Ile Asp Asp Asp Met Pro Leu Leu Thr Glu Thr  
 850 855 860  
 Asp Leu Met Trp Cys Pro Pro Glu Asp Leu Gln Thr Met Val Pro Lys  
 865 870 875 880  
 Glu Ile Asp Ala Ile Gln Gln Leu Gln Gln Leu Gln Gln Gln His  
 885 890 895  
 His Gln Gln Tyr Ala Gly Asn Thr Gly Tyr Gln Gln Gln Gln Gln  
 900 905 910  
 Pro Gln Leu Gln Gln His Phe Ser Asn Ser Leu Cys Ser Ser Pro  
 915 920 925  
 Ala Ser Thr Val Ser Ser Leu Ser Pro Ser Pro Val Gln Gln His His  
 930 935 940  
 Gln Gln Gln Ala Ala Val Phe Thr Ser Asp Ser Ser Glu Leu Ala  
 945 950 955 960  
 Ala Leu Leu Cys Gly Ser Gly Asn Gly Thr Leu Ser Ile Leu Ala Gly  
 965 970 975  
 Ser Gly Val Thr Val Ala Glu Glu Cys Asn Glu Arg Leu Gln Gln His  
 980 985 990  
 Gln Gln Gln Gln Gln Thr Ser Gly Asn Glu Phe Arg Thr Phe Gln  
 995 1000 1005  
 Gln Leu Gln Gln Glu Leu Gln Leu Gln Glu Gln Gln Gln Arg Gln  
 1010 1015 1020  
 Gln Leu Leu  
 1025 1030 1035 1040  
 Ser Leu Asn Ile Glu Cys Lys Lys Glu Lys Tyr Asp Val Gln Met Gly  
 1045 1050 1055  
 Gly Ser Leu Cys His Pro Met Glu Asp Ala Phe Glu Asn Asp Tyr Ser  
 1060 1065 1070  
 Lys Asp Ser Ala Asn Leu Asp Cys Trp Asp Leu Ile Gln Met Gln Val  
 1075 1080 1085  
 Val Asp Thr Glu Pro Val Ser Pro Asn Ala Ala Ser Pro Thr Pro Cys  
 1090 1095 1100  
 Lys Val Ser Ala Ile Gln Leu Leu Gln Gln Gln Gln Leu Gln Gln  
 1105 1110 1115 1120  
 Gln Gln Gln Gln Gln Asn Ile Ile Leu Asn Ala Val Pro Leu Ile  
 1125 1130 1135  
 Thr Ile Gln Asn Asn Lys Glu Leu Met Gln Gln Gln Gln Gln Gln  
 1140 1145 1150  
 Gln Gln Gln Gln Glu Gln Leu Gln Gln Pro Ala Ile Lys Leu Leu  
 1155 1160 1165  
 Asn Gly Ala Ser Ile Ala Pro Val Asn Thr Lys Ala Thr Ile Arg Leu  
 1170 1175 1180  
 Val Glu Ser Lys Pro Pro Thr Thr Gln Ser Arg Met Ala Lys Val  
 1185 1190 1195 1200  
 Asn Leu Val Pro Gln Gln Gln His Gly Asn Lys Arg His Leu Asn  
 1205 1210 1215  
 Ser Ala Thr Gly Ala Gly Asn Pro Val Glu Ser Lys Arg Leu Lys Ser  
 1220 1225 1230  
 Gly Thr Leu Cys Leu Asp Val Gln Ser Pro Gln Leu Leu Gln Gln Leu  
 1235 1240 1245  
 Ile Gly Lys Asp Pro Ala Gln Gln Gln Thr Gln Ala Ala Lys Arg Ala  
 1250 1255 1260  
 Gly Ser Glu Arg Trp Gln Leu Ser Ala Glu Ser Lys Gln Gln Lys Gln  
 1265 1270 1275 1280  
 Gln Gln Gln Ser Asn Ser Val Leu Lys Asn Leu Leu Val Ser Gly  
 1285 1290 1295  
 Arg Asp Asp Asp Asp Ser Glu Ala Met Ile Ile Asp Glu Asp Asn Ser  
 1300 1305 1310  
 Leu Val Gln Pro Ile Pro Leu Gly Lys Tyr Gly Leu Pro Leu His Cys  
 1315 1320 1325  
 His Thr Ser Thr Ser Ser Val Leu Arg Asp Tyr His Asn Asn Pro Leu  
 1330 1335 1340  
 Ile Ser Gly Thr Asn Phe Gln Leu Ser Pro Val Phe Gly Gly Ser Asp

1345	1350	1355	1360
Ser Ser Gly Gly Asp Gly Glu Thr Gly Ser Val Val Ser Leu Asp Asp			
1365	1370	1375	
Ser Val Pro Pro Gly Leu Thr Ala Cys Asp Thr Asp Ala Ser Ser Asp			
1380	1385	1390	
Ser Gly Ile Asp Glu Asn Ser Leu Met Asp Gly Ala Ser Gly Ser Pro			
1395	1400	1405	
Arg Lys Arg Leu Ser Ser Thr Ser Asn Ser Thr Asn Gln Ala Glu Ser			
1410	1415	1420	
Ala Pro Pro Ala Leu Asp Val Glu Thr Pro Val Thr Gln Lys Ser Val			
1425	1430	1435	1440
Glu Glu Glu Phe Glu Gly Gly Ser Gly Ser Asn Ala Pro Ser Arg			
1445	1450	1455	
Lys Thr Ser Ile Ser Phe Leu Asp Ser Ser Asn Pro Leu Leu His Thr			
1460	1465	1470	
Pro Ala Met Met Asp Leu Val Asn Asp Asp Tyr Ile Met Gly Glu Gly			
1475	1480	1485	
Gly Phe Glu Phe Ser Asp Asn Gln Leu Glu Gln Val Leu Gly Trp Pro			
1490	1495	1500	
Glu Ile Ala			
1505			

<210> 38  
 <211> 879  
 <212> PRT  
 <213> Homo sapiens

<400> 38			
Met Ala Gly Gly Gly Asp Leu Ser Thr Arg Arg Leu Asn Glu Cys			
1	5	10	15
Ile Ser Pro Val Ala Asn Glu Met Asn His Leu Pro Ala His Ser His			
20	25	30	
Asp Leu Gln Arg Met Phe Thr Glu Asp Gln Gly Val Asp Asp Arg Leu			
35	40	45	
Leu Tyr Asp Ile Val Phe Lys His Phe Lys Arg Asn Lys Val Glu Ile			
50	55	60	
Ser Asn Ala Ile Lys Lys Thr Phe Pro Phe Leu Glu Gly Leu Arg Asp			
65	70	75	80
Arg Asp Leu Ile Thr Asn Lys Met Phe Glu Asp Ser Gln Asp Ser Cys			
85	90	95	
Arg Asn Leu Val Pro Val Gln Arg Val Val Tyr Asn Val Leu Ser Glu			
100	105	110	
Leu Glu Lys Thr Phe Asn Leu Pro Val Leu Glu Ala Leu Phe Ser Asp			
115	120	125	
Val Asn Met Gln Glu Tyr Pro Asp Leu Ile His Ile Tyr Lys Gly Phe			
130	135	140	
Glu Asn Val Ile His Asp Lys Leu Pro Leu Gln Glu Ser Glu Glu			
145	150	155	160
Glu Arg Glu Glu Arg Ser Gly Leu Gln Leu Ser Leu Glu Gln Gly Thr			
165	170	175	
Gly Glu Asn Ser Phe Arg Ser Leu Thr Trp Pro Pro Ser Gly Ser Pro			
180	185	190	
Ser His Ala Gly Thr Thr Pro Pro Glu Asn Gly Leu Ser Glu His Pro			
195	200	205	
Cys Glu Thr Glu Gln Ile Asn Ala Lys Arg Lys Asp Thr Thr Ser Asp			
210	215	220	
Lys Asp Asp Ser Leu Gly Ser Gln Gln Thr Asn Glu Gln Cys Ala Gln			
225	230	235	240
Lys Ala Glu Pro Thr Glu Ser Cys Glu Gln Ile Ala Val Gln Val Asn			
245	250	255	
Asn Gly Asp Ala Gly Arg Glu Met Pro Cys Pro Leu Pro Cys Asp Glu			
260	265	270	

Glu Ser Pro Glu Ala Glu Leu His Asn His Gly Ile Gln Ile Asn Ser  
 275 280 285  
 Cys Ser Val Arg Leu Val Asp Ile Lys Lys Glu Lys Pro Phe Ser Asn  
 290 295 300  
 Ser Lys Val Glu Cys Gln Ala Gln Ala Arg Thr His His Asn Gln Ala  
 305 310 315 320  
 Ser Asp Ile Ile Val Ile Ser Ser Glu Asp Ser Glu Gly Ser Thr Asp  
 325 330 335  
 Val Asp Glu Pro Leu Glu Val Phe Ile Ser Ala Pro Arg Ser Glu Pro  
 340 345 350  
 Val Ile Asn Asn Asp Asn Pro Leu Glu Ser Asn Asp Glu Lys Glu Gly  
 355 360 365  
 Gln Glu Ala Thr Cys Ser Arg Pro Gln Ile Val Pro Glu Pro Met Asp  
 370 375 380  
 Phe Arg Lys Leu Ser Thr Phe Arg Glu Ser Phe Lys Lys Arg Val Ile  
 385 390 395 400  
 Gly Gln Asp His Asp Phe Ser Glu Ser Ser Glu Glu Glu Ala Pro Ala  
 405 410 415  
 Glu Ala Ser Ser Gly Ala Leu Arg Ser Lys His Gly Glu Lys Ala Pro  
 420 425 430  
 Met Thr Ser Arg Ser Thr Ser Thr Trp Arg Ile Pro Ser Arg Lys Arg  
 435 440 445  
 Arg Phe Ser Ser Ser Asp Phe Ser Asp Leu Ser Asn Gly Glu Glu Leu  
 450 455 460  
 Gln Glu Thr Cys Ser Ser Ser Leu Arg Arg Gly Ser Gly Ser Gln Pro  
 465 470 475 480  
 Gln Glu Pro Glu Asn Lys Lys Cys Ser Cys Val Met Cys Phe Pro Lys  
 485 490 495  
 Gly Val Pro Arg Ser Gln Glu Ala Arg Thr Glu Ser Ser Gln Ala Ser  
 500 505 510  
 Asp Met Met Asp Thr Met Asp Val Glu Asn Asn Ser Thr Leu Glu Lys  
 515 520 525  
 His Ser Gly Lys Arg Arg Lys Lys Arg Arg His Arg Ser Lys Val Asn  
 530 535 540  
 Gly Leu Gln Arg Gly Arg Lys Lys Asp Arg Pro Arg Lys His Leu Thr  
 545 550 555 560  
 Leu Asn Asn Lys Val Gln Lys Lys Arg Trp Gln Gln Arg Gly Arg Lys  
 565 570 575  
 Ala Asn Thr Arg Pro Leu Lys Arg Arg Lys Arg Gly Pro Arg Ile  
 580 585 590  
 Pro Lys Asp Glu Asn Ile Asn Phe Lys Gln Ser Glu Leu Pro Val Thr  
 595 600 605  
 Cys Gly Glu Val Lys Gly Thr Leu Tyr Lys Glu Arg Phe Lys Gln Gly  
 610 615 620  
 Thr Ser Lys Lys Cys Ile Gln Ser Glu Asp Lys Lys Trp Phe Thr Pro  
 625 630 635 640  
 Arg Glu Phe Glu Ile Glu Gly Asp Arg Gly Ala Ser Lys Asn Trp Lys  
 645 650 655  
 Leu Ser Ile Arg Cys Gly Gly Tyr Thr Leu Lys Val Leu Met Glu Asn  
 660 665 670  
 Lys Phe Leu Pro Glu Pro Pro Ser Thr Arg Lys Lys Arg Ile Leu Glu  
 675 680 685  
 Ser His Asn Asn Thr Leu Val Asp Pro Cys Glu Glu His Lys Lys Lys  
 690 695 700  
 Asn Pro Asp Ala Ser Val Lys Phe Ser Glu Phe Leu Lys Lys Cys Ser  
 705 710 715 720  
 Glu Thr Trp Lys Thr Ile Phe Ala Lys Glu Lys Gly Lys Phe Glu Asp  
 725 730 735  
 Met Ala Lys Ala Asp Lys Ala His Tyr Glu Arg Glu Met Lys Thr Tyr  
 740 745 750  
 Ile Pro Pro Lys Gly Glu Lys Lys Lys Phe Lys Asp Pro Asn Ala  
 755 760 765  
 Pro Lys Arg Pro Pro Leu Ala Phe Phe Leu Phe Cys Ser Glu Tyr Arg

770	775	780
Pro Lys Ile Lys Gly Glu His	Pro Gly Leu Ser Ile Asp Asp Val Val	
785	790	795 800
Lys Lys Leu Ala Gly Met Trp Asn Asn Thr Ala Ala Ala Asp Lys Gln		
805	810	815
Phe Tyr Glu Lys Lys Ala Ala Lys Leu Lys Glu Lys Tyr Lys Lys Asp		
820	825	830
Ile Ala Ala Tyr Arg Ala Lys Gly Lys Pro Asn Ser Ala Lys Lys Arg		
835	840	845
Val Val Lys Ala Glu Lys Ser Lys Lys Lys Glu Glu Glu Glu Asp		
850	855	860
Glu Glu Asp Glu Gln Glu Glu Asn Glu Glu Asp Asp Asp Lys		
865	870	875

<210> 39  
 <211> 284  
 <212> PRT  
 <213> Gallus gallus

<400> 39		
Met Glu Ala Ile Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu		
1 5 10 15		
Asn Ala Ile Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gln Ala		
20 25 30		
Glu Asp Arg Cys Lys Gln Leu Glu Glu Gln Gln Gly Leu Gln Lys		
35 40 45		
Lys Leu Lys Gly Thr Glu Asp Glu Val Glu Lys Tyr Ser Glu Ser Val		
50 55 60		
Lys Glu Ala Gln Glu Lys Leu Glu Gln Ala Glu Lys Lys Ala Thr Asp		
65 70 75 80		
Ala Glu Ala Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu		
85 90 95		
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys		
100 105 110		
Leu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys		
115 120 125		
Val Ile Glu Asn Arg Ala Met Lys Asp Glu Glu Lys Met Glu Leu Gln		
130 135 140		
Glu Met Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg		
145 150 155 160		
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Val Leu Glu Gly Glu Leu		
165 170 175		
Glu Arg Ser Glu Glu Arg Ala Glu Val Ala Glu Ser Arg Val Arg Gln		
180 185 190		
Leu Glu Glu Leu Arg Thr Met Asp Gln Ser Leu Lys Ser Leu Ile		
195 200 205		
Ala Ser Glu Glu Tyr Ser Thr Lys Glu Asp Lys Tyr Glu Glu Glu		
210 215 220		
Ile Lys Leu Leu Gly Glu Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu		
225 230 235 240		
Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu		
245 250 255		
Glu Glu Ser Leu Ala Ser Ala Lys Glu Glu Asn Val Gly Ile His Gln		
260 265 270		
Val Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Leu		
275 280		

<210> 40  
 <211> 284  
 <212> PRT  
 <213> Homo sapiens

<400> 40

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
1 5 10 15  
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
20 25 30  
Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys  
35 40 45  
Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
50 55 60  
Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
65 70 75 80  
Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
85 90 95  
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
100 105 110  
Leu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
115 120 125  
Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
130 135 140  
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg  
145 150 155 160  
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu  
165 170 175  
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu  
180 185 190  
Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
195 200 205  
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Arg Tyr Glu Glu Glu  
210 215 220  
Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
225 230 235 240  
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
245 250 255  
Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
260 265 270  
Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
275 280

<210> 41

<211> 284

<212> PRT

<213> Gallus gallus

<400> 41

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
1 5 10 15  
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
20 25 30  
Glu Glu Arg Ser Lys Gln Leu Glu Asp Asp Ile Val Gln Leu Glu Lys  
35 40 45  
Gln Leu Arg Val Thr Glu Asp Ser Arg Asp Gln Val Leu Glu Glu Leu  
50 55 60  
His Lys Ser Glu Asp Ser Leu Leu Ser Ala Glu Glu Asn Ala Ala Lys  
65 70 75 80  
Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
85 90 95  
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
100 105 110  
Leu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
115 120 125  
Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
130 135 140

Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145				150					155					160	
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Leu	Glu	Gly	Asp	Leu
				165				170					175		
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu
				180				185				190			
Leu	Glu	Glu	Leu	Lys	Leu	Val	Thr	Asn	Glu	Ala	Lys	Ser	Leu	Glu	
				195			200				205				
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
				210			215			220					
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
				225			230			235			240		
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245			250			255					
Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu	Glu	Asn	Leu	Asn	Met	His	Gln
				260			265			270					
Met	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu	Asn	Asn	Met				
				275			280								

<210> 42  
 <211> 248  
 <212> PRT  
 <213> Gallus gallus

<400> 42															
Met	Ala	Gly	Ile	Ser	Ser	Ile	Asp	Ala	Val	Lys	Lys	Ile	Gln	Ser	
1										10				15	
Leu	Gln	Gln	Val	Ala	Asp	Glu	Ala	Glu	Glu	Arg	Ala	Glu	His	Leu	Gln
									20	25			30		
Arg	Glu	Ala	Asp	Ala	Glu	Arg	Gln	Ala	Arg	Glu	Arg	Ala	Glu		
									35	40		45			
Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu	Glu	Glu	Leu	Asp
									50	55		60			
Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys	Leu	Glu	Glu	Ala
									65	70		75		80	
Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	Val	Ile	Glu	Asn
									85	90		95			
Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln	Glu	Met	Gln	Leu
									100	105		110			
Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg	Lys	Tyr	Glu	Glu
									115	120		125			
Val	Ala	Arg	Lys	Leu	Val	Val	Leu	Glu	Gly	Glu	Leu	Glu	Arg	Ser	Glu
									130	135		140			
Glu	Arg	Ala	Glu	Val	Ala	Glu	Ser	Arg	Val	Arg	Gln	Leu	Glu	Glu	
									145	150		155		160	
Leu	Arg	Thr	Met	Asp	Gln	Ser	Leu	Lys	Ser	Leu	Ile	Ala	Ser	Glu	Glu
									165	170		175			
Glu	Tyr	Ser	Thr	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	Ile	Lys	Leu	Leu
									180	185		190			
Gly	Glu	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg
									195	200		205			
Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu	Glu	Glu	Ser	Leu
									210	215		220			
Ala	Ser	Ala	Lys	Glu	Glu	Asn	Val	Gly	Ile	His	Gln	Val	Leu	Asp	Gln
									225	230		235		240	
Thr	Leu	Leu	Glu	Leu	Asn	Asn	Leu								
									245						

<210> 43  
 <211> 284  
 <212> PRT

<213> Homo sapiens

<400> 43

Met Glu Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
1 5 10 15  
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Glu Gln Lys Gln Ala  
20 25 30  
Glu Glu Arg Ser Lys Gln Leu Glu Asp Glu Leu Ala Ala Met Gln Lys  
35 40 45  
Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
50 55 60  
Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Ala Asp  
65 70 75 80  
Ala Glu Ala Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
85 90 95  
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
100 105 110  
Leu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
115 120 125  
Val Ile Glu Asn Arg Ala Leu Lys Asp Glu Glu Lys Met Glu Leu Gln  
130 135 140  
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
145 150 155 160  
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
165 170 175  
Glu Arg Thr Glu Glu Arg Ala Glu Leu Ala Glu Ser Lys Cys Ser Glu  
180 185 190  
Leu Glu Glu Leu Lys Asn Val Thr Asn Asn Leu Lys Ser Leu Glu  
195 200 205  
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
210 215 220  
Ile Lys Ile Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
225 230 235 240  
Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu  
245 250 255  
Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
260 265 270  
Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
275 280

<210> 44

<211> 245

<212> PRT

<213> Gallus gallus

<400> 44

Met Ala Ala Leu Ser Ser Leu Glu Ala Val Arg Lys Lys Ile Arg Ser  
1 5 10 15  
Leu Gln Glu Gln Ala Asp Ala Ala Glu Glu Arg Ala Gly Lys Leu Gln  
20 25 30  
Arg Glu Val Asp Gln Glu Arg Ala Leu Arg Glu Glu Ala Glu Ser Glu  
35 40 45  
Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp  
50 55 60  
Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys Leu Glu Glu Ala  
65 70 75 80  
Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Asn  
85 90 95  
Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln Glu Ile Gln Leu  
100 105 110  
Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg Lys Tyr Glu Glu  
115 120 125

Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu	Glu	Arg	Ala	Glu
130					135						140				
Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu	Leu	Glu	Glu	Glu
145					150				155					160	
Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu	Ala	Gln	Ala	Glu
					165				170					175	
Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	Ile	Lys	Val	Leu
					180			185					190		
Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg
					195			200				205			
Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu	Glu	Asp	Gln	Leu
					210			215			220				
Tyr	Gln	Gln	Leu	Glu	Gln	Asn	Ser	Arg	Leu	Thr	Asn	Glu	Leu	Lys	Leu
					225			230			235				240
Ala	Leu	Asn	Glu	Asp											
					245										

<210> 45  
 <211> 281  
 <212> PRT  
 <213> Gallus gallus

<400> 45															
Met	Asp	Ala	Ile	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu	
1						5			10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala
						20			25					30	
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ala	Leu	Gln	Lys
						35			40					45	
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ser	Leu
						50			55					60	
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Asp	Lys	Lys	Ala	Thr	Asp
						65			70					80	
Ala	Glu	Ser	Glu	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
						85			90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
						100			105					110	
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
						115			120					125	
Val	Ile	Glu	Asn	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
						130			135					140	
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
						145			150					160	
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu
						165			170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu
						180			185					190	
Leu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu	
						195			200					205	
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	
						210			215					220	
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
						225			230					240	
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
						245			250					255	
Glu	Asp	Gln	Leu	Tyr	Gln	Gln	Leu	Glu	Gln	Asn	Ser	Arg	Leu	Thr	Asn
						260			265					270	
Glu	Leu	Lys	Leu	Ala	Leu	Asn	Glu	Asp							
						275			280						

<210> 46

<211> 284  
<212> PRT  
<213> Brachydanio rerio

<400> 46

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
1 5 10 15  
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Thr Asp Lys Lys Ala Ala  
20 25 30  
Glu Glu Arg Ser Lys Gln Leu Glu Asp Asp Leu Val Ala Leu Gln Lys  
35 40 45  
Lys Leu Lys Ala Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
50 55 60  
Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
65 70 75 80  
Ala Glu Gly Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
85 90 95  
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
100 105 110  
Leu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
115 120 125  
Val Ile Glu Asn Arg Ala Leu Lys Asp Glu Glu Lys Met Glu Leu Gln  
130 135 140  
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
145 150 155 160  
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Val Glu Gly Glu Leu  
165 170 175  
Glu Arg Thr Glu Glu Arg Ala Glu Leu Asn Glu Gly Lys Cys Ser Glu  
180 185 190  
Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Met Lys Ser Leu Glu  
195 200 205  
Ala Gln Ala Glu Lys Tyr Ser Ala Lys Glu Asp Lys Tyr Glu Glu Glu  
210 215 220  
Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
225 230 235 240  
Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu  
245 250 255  
Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
260 265 270  
Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
275 280

<210> 47  
<211> 284  
<212> PRT  
<213> Coturnix coturnix japonica

<400> 47

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
1 5 10 15  
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
20 25 30  
Glu Glu Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Leu Gln Lys  
35 40 45  
Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ser Leu  
50 55 60  
Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Asp Lys Lys Ala Thr Asp  
65 70 75 80  
Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
85 90 95  
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
100 105 110

Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu  
 180 185 190  
 Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
 260 265 270  
 Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
 275 280

<210> 48  
 <211> 284  
 <212> PRT  
 <213> Mus musculus

<400> 48  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu  
 180 185 190  
 Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu

	260	265	270								
Glu	Leu	Asp	His	Ala	Leu	Asn	Asp	Met	Thr	Ser	Ile
275		280									

<210> 49  
 <211> 284  
 <212> PRT  
 <213> Rana temporaria

<400> 49  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gly Ala  
 20 25 30  
 Glu Asp Lys Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Met Gln Lys  
 35 40 45  
 Lys Met Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Asn Arg Ala Leu Lys Asp Glu Glu Lys Ile Glu Leu Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu  
 180 185 190  
 Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Thr Val Ala Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
 260 265 270  
 Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
 275 280

<210> 50  
 <211> 284  
 <212> PRT  
 <213> Rattus norvegicus

<400> 50  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60

Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Glu Ser Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu  
 180 185 190  
 Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
 260 265 270  
 Glu Leu Asp His Ala Leu Lys Asp Met Thr Ser Ile  
 275 280

<210> 51  
 <211> 284  
 <212> PRT  
 <213> Xenopus laevis

<400> 51  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gly Ala  
 20 25 30  
 Glu Asp Lys Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ser Asp Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Gly Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ser Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Asn Arg Ala Leu Lys Asp Glu Glu Lys Met Glu Leu Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Glu Gly Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu  
 180 185 190  
 Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu

210	215	220
Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu	Thr Arg Ala Glu	
225	230	235
Phe Ala Glu Arg Thr Val Ala Lys Leu Glu Lys Ser	Ile Asp Asp Leu	
245	250	255
Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys	Ala Ile Ser Glu	
260	265	270
Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile		
275	280	

<210> 52  
<211> 284  
<212> PRT  
<213> Gallus gallus

<400> 52			
Met Glu Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu			
1	5	10	15
Asn Ala Ile Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gln Ala			
20	25	30	
Glu Asp Arg Cys Lys Gln Leu Glu Glu Glu Gln Gln Gly Leu Gln Lys			
35	40	45	
Lys Leu Lys Gly Thr Glu Asp Glu Val Glu Lys Tyr Ser Glu Ser Val			
50	55	60	
Lys Glu Ala Gln Glu Lys Leu Glu Gln Ala Glu Lys Lys Ala Thr Asp			
65	70	75	80
Ala Glu Ala Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu			
85	90	95	
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys			
100	105	110	
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys			
115	120	125	
Val Ile Glu Asn Arg Ala Met Lys Asp Glu Glu Lys Met Glu Leu Gln			
130	135	140	
Glu Met Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg			
145	150	155	160
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Val Leu Glu Gly Glu Leu			
165	170	175	
Glu Arg Ser Glu Glu Arg Ala Glu Val Ala Glu Ser Lys Cys Gly Asp			
180	185	190	
Leu Glu Glu Leu Lys Ile Val Thr Asn Asn Leu Lys Ser Leu Glu			
195	200	205	
Ala Gln Ala Asp Lys Tyr Ser Thr Lys Glu Asp Lys Tyr Glu Glu Glu			
210	215	220	
Ile Lys Leu Leu Gly Glu Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu			
225	230	235	240
Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu			
245	250	255	
Glu Asp Glu Val Tyr Ala Gln Lys Met Lys Tyr Lys Ala Ile Ser Glu			
260	265	270	
Glu Leu Asp Asn Ala Leu Asn Asp Ile Thr Ser Leu			
275	280		

<210> 53  
<211> 284  
<212> PRT  
<213> Homo sapiens

<400> 53  
Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu

1	5	10	15												
Asn	Ala	Ile	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Gln	Ala
20					25							30			
Glu	Asp	Arg	Cys	Lys	Gln	Leu	Glu	Glu	Gln	Gln	Ala	Leu	Gln	Lys	
35						40						45			
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Val	Glu	Lys	Tyr	Ser	Glu	Ser	Val
50						55					60				
Lys	Glu	Ala	Gln	Glu	Lys	Leu	Glu	Gln	Ala	Glu	Lys	Lys	Ala	Thr	Asp
65						70				75				80	
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
											85			95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
									100		105			110	
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	
									115		120			125	
Val	Ile	Glu	Asn	Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln
								130		135			140		
Glu	Met	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ser	Asp	Arg
								145		150			155		160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Leu	Glu	Gly	Glu	Leu
								165		170			175		
Glu	Arg	Ser	Glu	Glu	Arg	Ala	Glu	Val	Ala	Glu	Ser	Lys	Cys	Gly	Asp
								180		185			190		
Leu	Glu	Glu	Glu	Leu	Lys	Ile	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
								195		200			205		
Ala	Gln	Ala	Asp	Lys	Tyr	Ser	Thr	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	
								210		215			220		
Ile	Lys	Leu	Leu	Glu	Glu	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
								225		230			235		240
Phe	Ala	Glu	Arg	Ser	Val	Ala	Lys	Leu	Glu	Lys	Thr	Ile	Asp	Asp	Leu
								245		250			255		
Glu	Asp	Glu	Val	Tyr	Ala	Gln	Lys	Met	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
								260		265			270		
Glu	Leu	Asp	Asn	Ala	Leu	Asn	Asp	Ile	Thr	Ser	Leu				
								275		280					

<210> 54  
 <211> 284  
 <212> PRT  
 <213> Mus musculus

<400> 54															
Met	Asp	Ala	Ile	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu	
1				5		10						15			
Asn	Ala	Ile	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Gln	Ala
						20		25				30			
Glu	Asp	Arg	Cys	Lys	Gln	Leu	Glu	Glu	Gln	Gln	Ala	Leu	Gln	Lys	
						35		40				45			
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Val	Glu	Lys	Tyr	Ser	Glu	Ser	Val
						50		55			60				
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Gln	Ala	Glu	Lys	Lys	Ala	Thr	Asp
						65		70			75			80	
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
								85		90			95		
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
								100		105			110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
								115		120			125		
Val	Ile	Glu	Asn	Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln
								130		135			140		
Glu	Met	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ser	Asp	Arg
								145		150			155		160

Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Leu Glu Gly Glu Leu  
 165 170 175  
 Glu Arg Ser Glu Glu Arg Ala Glu Val Ala Glu Ser Lys Cys Gly Asp  
 180 185 190  
 Leu Glu Glu Glu Leu Lys Ile Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Asp Lys Tyr Ser Thr Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Leu Leu Glu Glu Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu  
 245 250 255  
 Glu Asp Glu Val Tyr Ala Gln Lys Met Lys Tyr Lys Ala Ile Ser Glu  
 260 265 270  
 Glu Leu Asp Asn Ala Leu Asn Asp Ile Thr Ser Leu  
 275 280

<210> 55  
 <211> 284  
 <212> PRT  
 <213> Sus scrofa

<400> 55  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Asp Glu Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Ala Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Phe Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu  
 180 185 190  
 Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
 260 265 270  
 Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
 275 280

<210> 56

<211> 284  
<212> PRT  
<213> Gallus gallus

<400> 56

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5					10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala
				20					25					30	
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ala	Leu	Gln	Lys
				35					40					45	
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ser	Leu
				50					55					60	
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Asp	Lys	Lys	Ala	Thr	Asp
				65					70					80	
Ala	Glu	Ser	Glu	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
				100					105					110	
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
				115					120					125	
Val	Ile	Glu	Asn	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
				130					135					140	
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
				145					150					155	
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu
				165					170					175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Gln	Val	Arg	Gln
				180					185					190	
Leu	Glu	Glu	Gln	Leu	Arg	Ile	Met	Asp	Gln	Thr	Leu	Lys	Ala	Leu	Met
				195					200					205	
Ala	Ala	Glu	Asp	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	
				210					215					220	
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
				225					230					235	
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
				245					250					255	
Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu	Glu	Asn	Leu	Asn	Met	His	Gln
				260					265					270	
Met	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu	Asn	Asn	Asn	Met			
				275					280						

<210> 57  
<211> 284  
<212> PRT  
<213> Coturnix coturnix japonica

<400> 57

Met	Asp	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu	
1				5					10					15		
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala	Ala	
				20					25					30		
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ala	Leu	Gln	Lys	
				35					40					45		
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ser	Leu	
				50					55					60		
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ala	Asp	Lys	Lys	Ala	Thr	Asp	
				65					70					75		
Ala	Glu	Ser	Glu	Val	Ala	Arg	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
				85					90					95		
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys	

100	105	110	
Leu Glu Glu Ala Glu Lys Ala Ala Asp	Glu Ser Glu Arg	Gly Met Lys	
115	120	125	
Val Ile Glu Asn Arg Ala Gln Lys Asp	Glu Glu Lys Met	Glu Ile Gln	
130	135	140	
Glu Ile Gln Leu Lys Glu Ala Lys His	Ile Ala Glu Glu Ala Asp Arg		
145	150	155	160
Lys Tyr Glu Glu Val Ala Arg Lys Leu	Val Ile Ile Glu Gly Asp Leu		
165	170	175	
Glu Arg Ala Glu Glu Arg Ala Glu	Leu Ser Glu Ser Lys Cys Ala Glu		
180	185	190	
Leu Glu Glu Leu Lys Thr Val Thr Asn	Asn Leu Lys Ser Leu Glu		
195	200	205	
Ala Gln Ala Glu Lys Tyr Ser Gln Lys	Glu Asp Lys Tyr Glu Glu Glu		
210	215	220	
Ile Lys Val Leu Thr Asp Lys Leu Lys	Glu Ala Glu Thr Arg Ala Glu		
225	230	235	240
Phe Ala Glu Arg Ser Val Thr Lys Leu	Glu Lys Ser Ile Asp Asp Leu		
245	250	255	
Glu Glu Lys Val Ala His Ala Lys Glu	Glu Asn Leu Asn Met His Gln		
260	265	270	
Met Leu Asp Gln Thr Leu Leu Glu	Leu Asn Asn Met		
275	280		

<210> 58  
 <211> 248  
 <212> PRT  
 <213> Xenopus laevis

<400> 58
Met Ala Gly Ile Thr Ser Leu Glu Ala Val Lys Arg Lys Ile Lys Cys
1 5 10 15
Leu Gln Asp Gln Ala Asp Glu Ala Glu Glu Arg Ala Glu Lys Leu Gln
20 25 30
Arg Glu Arg Asp Met Glu Arg Lys Leu Arg Glu Ala Ala Glu Gly Asp
35 40 45
Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp
50 55 60
Arg Ala Gln Glu Arg Leu Ser Thr Ala Leu Gln Lys Leu Glu Glu Ala
65 70 75 80
Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Asn
85 90 95
Arg Ala Leu Lys Asp Glu Glu Lys Met Glu Leu Gln Glu Ile Gln Leu
100 105 110
Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg Lys Tyr Glu Glu
115 120 125
Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu Glu Arg Ala Glu
130 135 140
Glu Arg Ala Glu Leu Ser Glu Ser His Tyr Arg Gln Leu Glu Asp Gln
145 150 155 160
Gln Arg Ile Met Asp Gln Thr Leu Lys Thr Leu Ile Ala Ser Glu Glu
165 170 175
Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu Ile Lys Val Leu
180 185 190
Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu Phe Ala Glu Arg
195 200 205
Thr Val Ala Lys Leu Glu Lys Ser Ile Asp Asp Leu Glu Glu Lys Val
210 215 220
Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln Met Leu Asp Gln
225 230 235 240
Thr Leu Leu Glu Leu Asn Asn Met
245

<210> 59  
<211> 284  
<212> PRT  
<213> Gallus gallus

<400> 59  
Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
1 5 10 15  
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
20 25 30  
Glu Glu Arg Ser Lys Gln Leu Glu Asp Asp Ile Val Gln Leu Glu Lys  
35 40 45  
Gln Leu Arg Val Thr Glu Asp Ser Arg Asp Gln Val Leu Glu Glu Leu  
50 55 60  
His Lys Ser Glu Asp Ser Leu Leu Phe Ala Glu Glu Asn Ala Ala Lys  
65 70 75 80  
Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
85 90 95  
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
100 105 110  
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
115 120 125  
Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
130 135 140  
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
145 150 155 160  
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
165 170 175  
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu  
180 185 190  
Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
195 200 205  
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
210 215 220  
Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
225 230 235 240  
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
245 250 255  
Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln  
260 265 270  
Met Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Met  
275 280

<210> 60  
<211> 284  
<212> PRT  
<213> Coturnix coturnix japonica

<400> 60  
Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
1 5 10 15  
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
20 25 30  
Glu Glu Arg Ser Lys Gln Leu Glu Asp Asp Ile Val Gln Leu Glu Lys  
35 40 45  
Gln Leu Arg Val Thr Glu Asp Ser Arg Asp Gln Val Leu Glu Glu Leu  
50 55 60  
His Lys Ser Glu Asp Ser Leu Leu Ser Ala Glu Glu Ile Ala Ala Lys  
65 70 75 80  
Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
85 90 95

Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
100							105						110		
Leu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	
115						120					125				
Val	Ile	Glu	Asn	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
130						135					140				
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg
145					150				155					160	
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp	Leu
165						170							175		
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala	Glu
180						185							190		
Leu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu	
195						200					205				
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
210						215					220				
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Thr	Arg	Ala	Glu	
225					230					235			240		
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
245							250						255		
Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu	Glu	Asn	Leu	Asn	Met	His	Gln
260							265						270		
Met	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu	Asn	Asn	Met				
					275										
						280									

<210> 61  
 <211> 227  
 <212> PRT  
 <213> Homo sapiens

<400> 61																
Cys	Arg	Leu	Arg	Ile	Phe	Leu	Arg	Thr	Ala	Ser	Ser	Glu	His	Leu	His	
1					5				10				15			
Glu	Arg	Lys	Leu	Arg	Glu	Thr	Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	
						20			25				30			
Arg	Arg	Ile	Gln	Leu	Val	Glu	Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	
						35			40				45			
Leu	Ala	Thr	Val	Leu	Gln	Lys	Leu	Glu	Ala	Glu	Lys	Ala	Ala	Asp		
						50			55			60				
Glu	Ser	Glu	Arg	Gly	Met	Lys	Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	
					65			70		75			80			
Glu	Glu	Lys	Met	Glu	Ile	Gln	Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	
						85			90				95			
Ile	Ala	Glu	Asp	Ala	Asp	Arg	Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	
						100			105			110				
Val	Ile	Ile	Glu	Ser	Asp	Leu	Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	
						115			120			125				
Ser	Glu	Gly	Gln	Val	Arg	Gln	Leu	Glu	Glu	Gln	Leu	Arg	Ile	Met	Asp	
						130			135			140				
Ser	Asp	Leu	Glu	Ser	Ile	Asn	Ala	Ala	Glu	Asp	Lys	Tyr	Ser	Gln	Lys	
						145			150			155			160	
Glu	Asp	Arg	Tyr	Glu	Glu	Glu	Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	
							165		170				175			
Glu	Ala	Glu	Thr	Arg	Ala	Glu	Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	
							180		185				190			
Glu	Lys	Ser	Ile	Asp	Asp	Leu	Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu	
						195			200			205				
Glu	Asn	Leu	Ser	Met	His	Gln	Met	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu	
						210			215			220				
Asn	Asn	Met														
		225														

<210> 62  
<211> 284  
<212> PRT  
<213> Rattus norvegicus

<400> 62  
Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
1 5 10 15  
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
20 25 30  
Glu Asp Arg Ser Lys Gln Leu Glu Glu Asp Ile Ser Ala Lys Glu Lys  
35 40 45  
Leu Leu Arg Ala Ser Glu Asp Glu Arg Asp Arg Val Leu Glu Glu Leu  
50 55 60  
His Lys Ala Glu Asp Ser Leu Leu Ala Ala Asp Glu Thr Ala Ala Lys  
65 70 75 80  
Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
85 90 95  
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
100 105 110  
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
115 120 125  
Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
130 135 140  
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg  
145 150 155 160  
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu  
165 170 175  
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu  
180 185 190  
Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
195 200 205  
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
210 215 220  
Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
225 230 235 240  
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
245 250 255  
Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Ser Met His Gln  
260 265 270  
Met Leu His Gln Thr Leu Leu Glu Leu Asn Asn Met  
275 280

<210> 63  
<211> 281  
<212> PRT  
<213> Rattus norvegicus

<400> 63  
Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
1 5 10 15  
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
20 25 30  
Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys  
35 40 45  
Lys Leu Lys Ala Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
50 55 60  
Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
65 70 75 80  
Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
85 90 95  
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys

100	105	110
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys		
115	120	125
Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln		
130	135	140
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg		
145	150	155
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu		
165	170	175
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu		
180	185	190
Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu		
195	200	205
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu		
210	215	220
Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu		
225	230	235
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu		
245	250	255
Glu Asp Gln Leu Tyr His Gln Leu Glu Gln Asn Arg Arg Leu Thr Asn		
260	265	270
Glu Leu Lys Leu Ala Leu Asn Glu Asp		
275	280	

<210> 64  
 <211> 251  
 <212> PRT  
 <213> Rattus norvegicus

400	64		
Met Ala Gly Ser Ser Ser Leu Glu Ala Val Arg Arg Lys Ile Arg Ser			
1	5	10	15
Leu Gln Glu Gln Ala Asp Ala Ala Glu Glu Arg Ala Gly Ser Leu Gln			
20	25	30	
Arg Glu Leu Asp Gln Glu Arg Lys Leu Arg Glu Thr Ala Glu Ala Asp			
35	40	45	
Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp			
50	55	60	
Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys Leu Glu Glu Ala			
65	70	75	80
Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Ser			
85	90	95	
Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln Glu Ile Gln Leu			
100	105	110	
Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg Lys Tyr Glu Glu			
115	120	125	
Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu Glu Arg Ala Glu			
130	135	140	
Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu Leu Glu Glu Glu			
145	150	155	160
Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu Ala Gln Ala Glu			
165	170	175	
Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu Ile Lys Val Leu			
180	185	190	
Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu Phe Ala Glu Arg			
195	200	205	
Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu Glu Asp Lys Phe			
210	215	220	
Leu Cys Phe Ser Pro Pro Lys Thr Pro Ser Ser Ser Arg Met Ser His			
225	230	235	240
Leu Ser Glu Leu Cys Ile Cys Leu Leu Ser Ser			
245	250		

<210> 65  
<211> 245  
<212> PRT  
<213> Rattus norvegicus

<400> 65  
Met Ala Gly Ser Ser Ser Leu Glu Ala Val Arg Arg Lys Ile Arg Ser  
1 5 10 15  
Leu Gln Glu Gln Ala Asp Ala Ala Glu Glu Arg Ala Gly Ser Leu Gln  
20 25 30  
Arg Glu Leu Asp Gln Glu Arg Lys Leu Arg Glu Thr Ala Glu Ala Asp  
35 40 45  
Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp  
50 55 60  
Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys Leu Glu Glu Ala  
65 70 75 80  
Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Ser  
85 90 95  
Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln Glu Ile Gln Leu  
100 105 110  
Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg Lys Tyr Glu Glu  
115 120 125  
Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu Glu Arg Ala Glu  
130 135 140  
Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu Leu Glu Glu Glu  
145 150 155 160  
Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu Ala Gln Ala Glu  
165 170 175  
Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu Ile Lys Val Leu  
180 185 190  
Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu Phe Ala Glu Arg  
195 200 205  
Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu Glu Asp Gln Leu  
210 215 220  
Tyr His Gln Leu Glu Gln Asn Arg Arg Leu Thr Asn Glu Leu Lys Leu  
225 230 235 240  
Ala Leu Asn Glu Asp  
245

<210> 66  
<211> 961  
<212> PRT  
<213> Bos taurus

<400> 66  
Met Asn Phe Leu Arg Gly Val Met Gly Gly Gln Ser Ala Gly Pro Gln  
1 5 10 15  
His Thr Glu Ala Glu Thr Ile Gln Lys Leu Cys Asp Arg Val Ala Ser  
20 25 30  
Ser Thr Leu Leu Asp Asp Arg Arg Asn Ala Val Arg Ala Leu Lys Ser  
35 40 45  
Leu Ser Lys Lys Tyr Arg Leu Glu Val Gly Ile Gln Ala Met Glu His  
50 55 60  
Leu Ile His Val Leu Gln Thr Asp Arg Ser Asp Ser Glu Ile Ile Gly  
65 70 75 80  
Tyr Ala Leu Asp Thr Leu Tyr Asn Ile Ile Ser Asn Asp Glu Glu Glu  
85 90 95  
Glu Val Glu Glu Asn Ser Thr Arg Gln Ser Glu Asp Leu Gly Ser Gln  
100 105 110  
Phe Thr Glu Ile Phe Ile Lys Gln Gln Glu Asn Val Thr Leu Leu Leu  
115 120 125

Ser Leu Leu Glu Glu Phe Asp Phe His Val Arg Trp Pro Gly Val Lys  
 130 135 140  
 Leu Leu Thr Ser Leu Leu Lys Gln Leu Gly Pro Gln Val Gln Gln Ile  
 145 150 155 160  
 Ile Leu Val Ser Pro Met Gly Val Ser Arg Leu Met Asp Leu Leu Ala  
 165 170 175  
 Asp Ser Arg Glu Val Ile Arg Asn Asp Gly Val Leu Leu Leu Gln Ala  
 180 185 190  
 Leu Thr Arg Ser Asn Gly Ala Ile Gln Lys Ile Val Ala Phe Glu Asn  
 195 200 205  
 Ala Phe Glu Arg Leu Leu Asp Ile Ile Thr Glu Glu Gly Asn Ser Asp  
 210 215 220  
 Gly Gly Ile Val Val Glu Asp Cys Leu Ile Leu Leu Gln Asn Leu Leu  
 225 230 235 240  
 Lys Asn Asn Asn Ser Asn Gln Asn Phe Phe Lys Glu Gly Ser Tyr Ile  
 245 250 255  
 Gln Arg Met Lys Pro Trp Phe Glu Val Gly Asp Glu Asn Ser Gly Trp  
 260 265 270  
 Ser Ala Gln Lys Val Thr Asn Leu His Leu Met Leu Gln Leu Val Arg  
 275 280 285  
 Val Leu Val Ser Pro Asn Asn Pro Pro Gly Ala Thr Ser Ser Cys Gln  
 290 295 300  
 Lys Ala Met Phe Gln Cys Gly Leu Leu Gln Gln Leu Cys Thr Ile Leu  
 305 310 315 320  
 Met Ala Thr Gly Val Pro Ala Asp Ile Leu Thr Glu Thr Ile Asn Thr  
 325 330 335  
 Val Ser Glu Val Ile Arg Gly Cys Gln Val Asn Gln Asp Tyr Phe Ala  
 340 345 350  
 Ser Val Asn Ala Pro Ser Asn Pro Pro Arg Pro Ala Ile Val Val Leu  
 355 360 365  
 Leu Met Ser Met Val Asn Glu Arg Gln Pro Phe Val Leu Arg Cys Ala  
 370 375 380  
 Val Leu Tyr Cys Phe Gln Cys Phe Leu Tyr Lys Asn Gln Lys Gly Gln  
 385 390 395 400  
 Gly Glu Ile Val Ser Thr Leu Leu Pro Ser Thr Ile Asp Ala Thr Gly  
 405 410 415  
 Asn Thr Val Ser Ala Gly Gln Leu Leu Cys Gly Gly Leu Phe Ser Thr  
 420 425 430  
 Asp Ser Leu Ser Asn Trp Cys Ala Ala Val Ala Leu Ala His Ala Leu  
 435 440 445  
 Gln Glu Asn Ala Thr Gln Lys Glu Gln Leu Leu Arg Val Gln Leu Ala  
 450 455 460  
 Thr Ser Ile Gly Asn Pro Pro Val Ser Leu Leu Gln Gln Cys Thr Asn  
 465 470 475 480  
 Ile Leu Ser Gln Gly Ser Lys Ile Gln Thr Arg Val Gly Leu Leu Met  
 485 490 495  
 Leu Leu Cys Thr Trp Leu Ser Asn Cys Pro Ile Ala Val Thr His Phe  
 500 505 510  
 Leu His Asn Ser Ala Asn Val Pro Phe Leu Thr Gly Gln Ile Ala Glu  
 515 520 525  
 Asn Leu Gly Glu Glu Glu Gln Leu Val Gln Gly Leu Cys Ala Leu Leu  
 530 535 540  
 Leu Gly Ile Ser Ile Tyr Phe Asn Asp Asn Ser Leu Glu Thr Tyr Met  
 545 550 555 560  
 Lys Glu Lys Leu Lys Gln Leu Ile Glu Lys Arg Ile Gly Lys Glu Asn  
 565 570 575  
 Phe Ile Glu Lys Leu Gly Phe Ile Ser Lys His Glu Leu Tyr Ser Arg  
 580 585 590  
 Ala Ser Gln Lys Pro Gln Pro Asn Phe Pro Ser Pro Glu Tyr Met Ile  
 595 600 605  
 Phe Asp His Glu Phe Thr Lys Leu Val Lys Glu Leu Glu Gly Val Ile  
 610 615 620  
 Thr Lys Ala Ile Tyr Lys Ser Ser Glu Glu Asp Lys Lys Glu Glu

625	630	635	640												
Val	Lys	Thr	Leu	Glu	Gln	His	Asp	Ser	Ile	Val	Thr	His	Tyr	Lys	
645	650	655													
Asn	Met	Ile	Arg	Glu	Gln	Asp	Leu	Gln	Leu	Glu	Glu	Leu	Lys	Gln	Gln
660	665	670													
Ile	Ser	Thr	Leu	Lys	Cys	Gln	Asn	Glu	Gln	Leu	Gln	Thr	Ala	Val	Thr
675	680	685													
Gln	Gln	Val	Ser	Gln	Ile	Gln	Gln	His	Lys	Asp	Gln	Tyr	Asn	Leu	Leu
690	695	700													
Lys	Val	Gln	Leu	Gly	Lys	Asp	Ser	Gln	His	Gln	Gly	Pro	Tyr	Thr	Asp
705	710	715	720												
Gly	Ala	Gln	Met	Asn	Gly	Val	Gln	Pro	Glu	Glu	Ile	Ser	Arg	Leu	Arg
725	730	735													
Glu	Glu	Ile	Glu	Glu	Leu	Lys	Ser	Asn	Arg	Glu	Leu	Leu	Gln	Ser	Gln
740	745	750													
Leu	Ala	Glu	Lys	Asp	Ser	Leu	Ile	Glu	Asn	Leu	Lys	Ser	Ser	Gln	Leu
755	760	765													
Ser	Pro	Gly	Thr	Asn	Glu	Gln	Ser	Ser	Ala	Thr	Ala	Gly	Asp	Ser	Glu
770	775	780													
Gln	Ile	Ala	Glu	Leu	Lys	Gln	Glu	Leu	Ala	Thr	Leu	Lys	Ser	Gln	Leu
785	790	795	800												
Asn	Ser	Gln	Ser	Val	Glu	Ile	Thr	Lys	Leu	Gln	Thr	Glu	Lys	Gln	Glu
805	810	815													
Leu	Leu	Gln	Thr	Glu	Ala	Phe	Ala	Lys	Ser	Ala	Pro	Val	Pro	Gly	
820	825	830													
Glu	Ser	Glu	Thr	Val	Ile	Ala	Thr	Lys	Thr	Thr	Asp	Val	Glu	Gly	Arg
835	840	845													
Leu	Ser	Ala	Leu	Leu	Gln	Glu	Thr	Lys	Glu	Leu	Lys	Asn	Glu	Ile	Lys
850	855	860													
Ala	Leu	Ser	Glu	Glu	Arg	Thr	Ala	Ile	Lys	Glu	Gln	Leu	Asp	Ser	Ser
865	870	875	880												
Asn	Ser	Thr	Ile	Ala	Ile	Leu	Gln	Asn	Glu	Lys	Asn	Lys	Leu	Glu	Val
885	890	895													
Asp	Ile	Thr	Asp	Ser	Lys	Glu	Gln	Asp	Asp	Leu	Leu	Val	Leu	Leu	
900	905	910													
Ala	Asp	Gln	Asp	Gln	Lys	Ile	Phe	Ser	Leu	Lys	Asn	Lys	Leu	Lys	Glu
915	920	925													
Leu	Gly	His	Pro	Val	Glu	Glu	Glu	Asp	Glu	Leu	Glu	Ser	Gly	Asp	Gln
930	935	940													
Asp	Asp	Glu	Asp	Asp	Glu	Asp	Asp	Asp	Gly	Lys	Glu	Gln	Gly	His	
945	950	955	960												
Ile															

<210> 67  
<211> 959  
<212> PRT  
<213> Rattus norvegicus

<400> 67															
Met	Asn	Phe	Leu	Arg	Gly	Val	Met	Gly	Gly	Gln	Ser	Ala	Gly	Pro	Gln
1	5	10	15												
His	Thr	Glu	Ala	Glu	Thr	Ile	Gln	Lys	Leu	Cys	Asp	Arg	Val	Ala	Ser
20	25	30													
Ser	Thr	Leu	Leu	Asp	Asp	Arg	Arg	Asn	Ala	Val	Arg	Ala	Leu	Lys	Ser
35	40	45													
Leu	Ser	Lys	Lys	Tyr	Arg	Leu	Glu	Val	Gly	Ile	Gln	Ala	Met	Glu	His
50	55	60													
Leu	Ile	His	Val	Leu	Gln	Thr	Asp	Arg	Ser	Asp	Ser	Glu	Ile	Ile	Ala
65	70	75	80												
Tyr	Ala	Leu	Asp	Thr	Leu	Tyr	Asn	Ile	Ile	Ser	Asn	Asp	Glu	Glu	
85	90	95													

Glu Val Glu Glu Asn Ser Thr Arg Gln Ser Glu Asp Leu Gly Ser Gln  
 100 105 110  
 Phe Thr Glu Ile Phe Ile Lys Gln Pro Glu Asn Val Thr Leu Leu Leu  
 115 120 125  
 Ser Leu Leu Glu Glu Phe Asp Phe His Val Arg Trp Pro Gly Val Arg  
 130 135 140  
 Leu Leu Thr Ser Leu Leu Lys Gln Leu Gly Pro Pro Val Gln Gln Ile  
 145 150 155 160  
 Ile Leu Val Ser Pro Met Gly Val Ser Lys Leu Met Asp Leu Leu Ala  
 165 170 175  
 Asp Ser Arg Glu Ile Ile Arg Asn Asp Gly Val Leu Leu Leu Gln Ala  
 180 185 190  
 Leu Thr Arg Ser Asn Gly Ala Ile Gln Lys Ile Val Ala Phe Glu Asn  
 195 200 205  
 Ala Phe Glu Arg Leu Leu Asp Ile Ile Thr Glu Glu Gly Asn Ser Asp  
 210 215 220  
 Gly Gly Ile Val Val Glu Asp Cys Leu Ile Leu Leu Gln Asn Leu Leu  
 225 230 235 240  
 Lys Asn Asn Asn Ser Asn Gln Asn Phe Phe Lys Glu Gly Ser Tyr Ile  
 245 250 255  
 Gln Arg Met Lys Ala Trp Phe Glu Val Gly Asp Glu Asn Pro Gly Trp  
 260 265 270  
 Ser Ala Gln Lys Val Thr Asn Leu His Leu Met Leu Gln Leu Val Arg  
 275 280 285  
 Val Leu Val Ser Pro Thr Asn Pro Pro Gly Ala Thr Ser Ser Cys Gln  
 290 295 300  
 Lys Ala Met Phe Gln Cys Gly Leu Leu Gln Gln Leu Cys Thr Ile Leu  
 305 310 315 320  
 Met Ala Thr Gly Ile Pro Ala Asp Ile Leu Thr Glu Thr Ile Asn Thr  
 325 330 335  
 Val Ser Glu Val Ile Arg Gly Cys Gln Val Asn Gln Asp Tyr Phe Ala  
 340 345 350  
 Ser Val Asn Ala Pro Ser Asn Pro Pro Arg Pro Ala Ile Val Val Leu  
 355 360 365  
 Leu Met Ser Met Val Asn Glu Arg Gln Pro Phe Val Leu Arg Cys Ala  
 370 375 380  
 Val Leu Tyr Cys Phe Gln Cys Phe Leu Tyr Lys Asn Glu Lys Gly Gln  
 385 390 395 400  
 Gly Glu Ile Val Ala Thr Leu Leu Pro Ser Thr Ile Asp Ala Thr Gly  
 405 410 415  
 Asn Ser Val Ser Ala Gly Gln Leu Leu Cys Gly Leu Phe Ser Thr  
 420 425 430  
 Asp Ser Leu Ser Asn Trp Cys Ala Ala Val Ala Leu Ala His Ala Leu  
 435 440 445  
 Gln Gly Asn Ala Thr Gln Lys Glu Gln Leu Leu Arg Val Gln Leu Ala  
 450 455 460  
 Thr Ser Ile Gly Asn Pro Pro Val Ser Leu Leu Gln Gln Cys Thr Asn  
 465 470 475 480  
 Ile Leu Ser Gln Gly Ser Lys Ile Gln Thr Arg Val Gly Leu Leu Met  
 485 490 495  
 Leu Leu Cys Thr Trp Leu Ser Asn Cys Pro Ile Ala Val Thr His Phe  
 500 505 510  
 Leu His Asn Ser Ala Asn Val Pro Phe Leu Thr Gly Gln Ile Ala Glu  
 515 520 525  
 Asn Leu Gly Glu Glu Gln Leu Val Gln Gly Leu Cys Ala Leu Leu  
 530 535 540  
 Leu Gly Ile Ser Ile Tyr Phe Asn Asp Asn Ser Leu Glu Asn Tyr Thr  
 545 550 555 560  
 Lys Glu Lys Leu Lys Gln Leu Ile Glu Lys Arg Ile Gly Lys Glu Asn  
 565 570 575  
 Tyr Ile Glu Lys Leu Gly Phe Ile Ser Lys His Glu Leu Tyr Ser Arg  
 580 585 590  
 Ala Ser Gln Lys Pro Gln Pro Asn Phe Pro Ser Pro Glu Tyr Met Ile

595	600	605
Phe Asp His Glu Phe Thr Lys Leu Val Lys Glu Leu Glu Gly Val Ile		
610	615	620
Thr Lys Ala Ile Tyr Lys Ser Ser Glu Glu Asp Lys Lys Glu Glu Glu		
625	630	635
Val Lys Lys Thr Leu Glu Gln His Asp Asn Ile Val Thr His Tyr Lys		
645	650	655
Asn Met Ile Arg Glu Gln Asp Leu Gln Leu Glu Glu Leu Lys Gln Gln		
660	665	670
Val Ser Thr Leu Lys Cys Gln Asn Glu Gln Leu Gln Thr Ala Val Thr		
675	680	685
Gln Gln Ala Ser Gln Ile Gln Gln His Lys Asp Gln Tyr Asn Leu Leu		
690	695	700
Lys Val Gln Leu Gly Lys Asp Asn His His Gln Gly Ser His Ser Asp		
705	710	715
Gly Ala Gln Val Asn Gly Ile Gln Pro Glu Glu Ile Ser Arg Leu Arg		
725	730	735
Glu Glu Ile Glu Glu Leu Arg Ser His Gln Val Leu Leu Gln Ser Gln		
740	745	750
Leu Ala Glu Lys Asp Thr Val Ile Glu Asn Leu Arg Ser Ser Gln Val		
755	760	765
Ser Gly Met Ser Glu Gln Ala Leu Ala Thr Cys Ser Pro Arg Asp Ala		
770	775	780
Glu Gln Val Ala Glu Leu Lys Gln Glu Leu Ser Ala Leu Lys Ser Gln		
785	790	795
Leu Cys Ser Gln Ser Leu Glu Ile Thr Arg Leu Gln Thr Glu Asn Ser		
805	810	815
Glu Leu Gln Gln Arg Ala Glu Thr Leu Ala Lys Ser Val Pro Val Glu		
820	825	830
Gly Glu Ser Glu Leu Val Thr Ala Ala Lys Thr Thr Asp Val Glu Gly		
835	840	845
Arg Leu Ser Ala Leu Leu Gln Glu Thr Lys Glu Leu Lys Asn Glu Ile		
850	855	860
Lys Ala Leu Ser Glu Glu Arg Thr Ala Ile Gln Lys Gln Leu Asp Ser		
865	870	875
Ser Asn Ser Thr Ile Ala Ile Leu Gln Thr Glu Lys Asp Lys Leu Tyr		
885	890	895
Leu Glu Val Thr Asp Ser Lys Lys Glu Gln Asp Asp Leu Leu Val Leu		
900	905	910
Leu Ala Asp Gln Asp Gln Lys Ile Leu Ser Leu Lys Ser Lys Leu Lys		
915	920	925
Asp Leu Gly His Pro Val Glu Glu Glu Asp Glu Ser Gly Asp Gln Glu		
930	935	940
Asp Asp Asp Asp Glu Leu Asp Asp Gly Asp Arg Asp Gln Asp Ile		
945	950	955

<210> 68  
<211> 1139  
<212> PRT  
<213> *Caenorhabditis elegans*

<400> 68

Met Ser Tyr Ser Asn Gly Asn Ile Asn Cys Asp Ile Met Pro Thr Ile			
1	5	10	15
Ser Glu Asp Gly Val Asp Asn Gly Gly Pro Ile Asp Glu Pro Ser Asp			
20	25	30	
Arg Asp Asn Ile Glu Gln Leu Met Met Asn Met Leu Glu Asp Arg Asp			
35	40	45	
Lys Leu Gln Glu Gln Leu Glu Asn Tyr Lys Val Gln Leu Glu Asn Ala			
50	55	60	
Gly Leu Arg Thr Lys Glu Val Glu Lys Glu Arg Asp Met Met Lys Arg			
65	70	75	80

Gln Phe Glu Val His Thr Gln Asn Leu Pro Gln Glu Leu Gln Thr Met  
       85                 90                 95  
 Thr Arg Glu Leu Cys Leu Leu Lys Glu Gln Leu Leu Glu Lys Asp Glu  
       100             105             110  
 Glu Ile Val Glu Leu Lys Ala Glu Arg Asn Asn Thr Arg Leu Leu Leu  
       115             120             125  
 Glu His Leu Glu Cys Leu Val Ser Arg His Glu Arg Ser Leu Arg Met  
       130             135             140  
 Thr Val Met Lys Arg Gln Ala Gln Asn His Ala Gly Val Ser Ser Glu  
       145             150             155             160  
 Val Glu Val Leu Lys Ala Leu Lys Ser Leu Phe Glu His His Lys Ala  
       165             170             175  
 Leu Asp Glu Lys Val Arg Glu Arg Leu Arg Val Ala Met Glu Arg Val  
       180             185             190  
 Ala Thr Leu Glu Glu Leu Ser Thr Lys Gly Asp Glu Asn Ser Ser  
       195             200             205  
 Leu Lys Ala Arg Ile Ala Thr Tyr Ala Ala Glu Ala Glu Glu Ala Met  
       210             215             220  
 Ala Ser Asn Ala Pro Ile Asn Gly Ser Ile Ser Ser Glu Ser Ala Asn  
       225             230             235             240  
 Arg Leu Ile Glu Met Gln Glu Ala Leu Glu Arg Met Lys Thr Glu Leu  
       245             250             255  
 Ala Asn Ser Leu Lys Gln Ser Thr Glu Ile Thr Thr Arg Asn Ala Glu  
       260             265             270  
 Leu Glu Asp Gln Leu Thr Glu Asp Ala Arg Glu Lys His Ala Ala Gln  
       275             280             285  
 Glu Ser Ile Val Arg Leu Lys Asn Gln Ile Cys Glu Leu Asp Ala Gln  
       290             295             300  
 Arg Thr Asp Gln Glu Thr Arg Ile Thr Thr Phe Glu Ser Arg Phe Leu  
       305             310             315             320  
 Thr Ala Gln Arg Glu Ser Thr Cys Ile Arg Asp Leu Asn Asp Lys Leu  
       325             330             335  
 Glu His Gln Leu Ala Asn Lys Asp Ala Ala Val Arg Leu Asn Glu Glu  
       340             345             350  
 Lys Val His Ser Leu Gln Glu Arg Leu Glu Leu Ala Glu Lys Gln Leu  
       355             360             365  
 Ala Gln Ser Leu Lys Lys Ala Glu Ser Leu Pro Ser Val Glu Ala Glu  
       370             375             380  
 Leu Gln Gln Arg Met Glu Ala Leu Thr Ala Ala Glu Gln Lys Ser Val  
       385             390             395             400  
 Ser Ala Glu Glu Arg Ile Gln Arg Leu Asp Arg Asn Ile Gln Glu Leu  
       405             410             415  
 Ser Ala Glu Leu Glu Arg Ala Val Gln Arg Glu Arg Met Asn Glu Glu  
       420             425             430  
 His Ser Gln Arg Leu Ser Ser Thr Val Asp Lys Leu Leu Ser Glu Ser  
       435             440             445  
 Asn Asp Arg Leu Gln Leu His Leu Lys Glu Arg Met Gln Ala Leu Asp  
       450             455             460  
 Asp Lys Asn Arg Leu Thr Gln Gln Leu Asp Gly Thr Lys Lys Ile Tyr  
       465             470             475             480  
 Asp Gln Ala Glu Arg Ile Lys Asp Arg Leu Gln Arg Asp Asn Glu Ser  
       485             490             495  
 Leu Arg Gln Glu Ile Glu Ala Leu Arg Gln Gln Leu Tyr Asn Ala Arg  
       500             505             510  
 Thr Ala Gln Phe Gln Ser Arg Met His Ala Ile Pro Phe Thr His Ala  
       515             520             525  
 Gln Asn Ile Val Gln Gln Pro Gln Ala Ser Ile Ala Gln Gln Ser  
       530             535             540  
 Ala Tyr Gln Met Tyr Lys Gln Gln Pro Ala Gln Gln Tyr Gln Thr Val  
       545             550             555             560  
 Gly Met Arg Arg Pro Asn Lys Gly Arg Ile Ser Ala Leu Gln Asp Asp  
       565             570             575  
 Pro Asn Lys Val Gln Thr Leu Asn Glu Gln Glu Trp Asp Arg Leu Gln

580	585	590
Gln Ala His Val Leu Ala Asn Val	Gln Gln Ala Phe Ser Ser Ser Pro	
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Ser Leu Ala Asp Val Gly Gln Ser Thr Leu Pro Arg Pro Asn Thr Ala		
610	615	620
Val Gln His Gln Gln Asp Asp Met Met Asn Ser Gly Met Gly Met Pro		
625	630	635
Ser Gly Met Gln Gly Met Gln Gly Gly Met Gly Gly Gly Gln Asp		
645	650	655
Ala Gln Met Leu Ala Ser Met Leu Gln Asp Arg Leu Asp Ala Ile Asn		
660	665	670
Thr Glu Ile Arg Leu Ile Gln Gln Glu Lys His His Ala Glu Arg Val		
675	680	685
Ala Glu Gln Leu Glu Arg Ser Ser Arg Glu Phe Tyr Asp Asp Gln Gly		
690	695	700
Ile Ser Thr Arg Ser Ser Pro Arg Ala Ser Pro Gln Leu Asp Asn Met		
705	710	715
Arg Gln His Lys Tyr Asn Thr Leu Pro Ala Asn Val Ser Gly Asp Arg		
725	730	735
Arg Tyr Asp Ile Tyr Gly Asn Pro Gln Phe Val Asp Asp Arg Met Val		
740	745	750
Arg Asp Leu Asp Tyr Glu Pro Arg Arg Gly Tyr Asn Gln Phe Asp Glu		
755	760	765
Met Gln Tyr Glu Arg Asp Arg Met Ser Pro Ala Ser Ser Val Ala Ser		
770	775	780
Ser Thr Asp Gly Val Leu Gly Gly Lys Lys Lys Arg Ser Asn Ser Ser		
785	790	795
Ser Gly Leu Lys Thr Leu Gly Arg Phe Phe Asn Lys Lys Lys Asn Ser		
805	810	815
Ser Ser Asp Leu Phe Lys Arg Asn Gly Asp Tyr Ser Asp Gly Glu Gln		
820	825	830
Ser Gly Thr Glu Gly Asn Gln Lys Ala Asp Tyr Asp Arg Arg Lys Lys		
835	840	845
Lys Lys His Glu Leu Leu Glu Glu Ala Met Lys Ala Arg Thr Pro Phe		
850	855	860
Ala Leu Trp Asn Gly Pro Thr Val Val Ala Trp Leu Glu Leu Trp Val		
865	870	875
Gly Met Pro Ala Trp Tyr Val Ala Ala Cys Arg Ala Asn Val Lys Ser		
885	890	895
Gly Ala Ile Met Ser Ala Leu Ser Asp Gln Glu Ile Gln Lys Glu Ile		
900	905	910
Gly Ile Ser Asn Pro Leu His Arg Leu Lys Leu Arg Leu Ala Ile Gln		
915	920	925
Glu Met Val Ser Leu Thr Ser Pro Ser Ala Pro Arg Thr Ala Arg Leu		
930	935	940
Thr Leu Ala Phe Gly Asp Met Asn His Glu Tyr Ile Gly Asn Asp Trp		
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Leu Pro Cys Leu Gly Leu Ala Gln Tyr Arg Ser Ala Phe Met Glu Cys		
965	970	975
Leu Leu Asp Ala Arg Met Leu Glu His Leu Ser Lys Arg Asp Leu Arg		
980	985	990
Thr His Leu Arg Met Val Asp Thr Phe His Arg Thr Ser Leu Gln Tyr		
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Gly Ile Met Cys Leu Lys Lys Val Asn Tyr Asp Lys Lys Val Leu Ala		
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Asp Arg Arg Lys Ala Cys Asp Asn Ile Asn Thr Asp Leu Leu Val Trp		
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Ser Asn Glu Arg Val Gln Arg Trp Val Glu Glu Ile Gly Leu Gly Val		
1045	1050	1055
Phe Ser Arg Asn Leu Val Asp Ser Gly Ile His Gly Ala Leu Ile Ala		
1060	1065	1070
Leu Asp Glu Thr Phe Asp Ala Ser Ala Phe Ala Tyr Ala Leu Gln Ile		
1075	1080	1085

Gly Ser Gln Asp Val Pro Asn Arg Gln Leu Leu Glu Lys Lys Phe Ile  
 1090 1095 1100  
 Gly Leu Val Asn Asp His Arg Gln Gln Ser Asp Pro His Pro Arg Ser  
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 <212> PRT  
 <213> *Caenorhabditis elegans*

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 35 40 45  
 Ser Gly Ser Gly Asn Ile Phe Lys Asp Asn Gly Ser Ile Lys Arg Arg  
 50 55 60  
 Gln Ala Leu Pro Tyr Val Thr His Tyr Ser Asp Ser Gly Phe Gly Ser  
 65 70 75 80  
 Ala Pro Ser Ala Gly Ser Ser Cys Ser Tyr Leu Pro Pro Pro Pro  
 85 90 95  
 Tyr Arg Met Arg Gly Ser Gly Gly Leu Ser Ser Lys Pro Gln His Lys  
 100 105 110  
 Ile His Arg Ser Leu Ser Asp Ser Lys Tyr Thr Ala Ser Leu Met Thr  
 115 120 125  
 Thr Gly Val Pro Thr Leu Pro Leu Leu Ser Met Thr Pro Phe Asn Gln  
 130 135 140  
 Leu Gln Ser Arg Asp Ala Arg Gly Ala Ser Trp Ile Ser Leu Val Arg  
 145 150 155 160  
 Ala Pro Asn Phe His Leu Tyr Cys Phe Phe Val Phe Phe Ser Phe  
 165 170 175  
 Asn Ile Asp Glu Thr Phe Arg Asn Ser Asn Ile Ser Ser Pro Ser Pro  
 180 185 190  
 Ser Met Ser Thr Val Ser Cys Pro Glu Tyr Pro Glu Leu Gln Asp Lys  
 195 200 205  
 Leu His Arg Leu Ala Met Ala Arg Asp Ser Leu Gln Leu Gln Val Ser  
 210 215 220  
 Val Leu Ser Glu Gln Val Gly Ala Gln Lys Glu Lys Ile Lys Asp Leu  
 225 230 235 240  
 Glu Thr Val Ile Ala Leu Lys Arg Asn Asn Leu Thr Ser Thr Glu Glu  
 245 250 255  
 Leu Leu Gln Asp Lys Tyr His Arg Ile Asp Glu Cys Gln Glu Leu Glu  
 260 265 270  
 Ser Lys Lys Met Asp Leu Leu Ala Glu Val Ser Ser Leu Lys Leu Arg  
 275 280 285  
 Tyr Ala Thr Leu Glu Arg Glu Lys Asn Glu Thr Glu Lys Lys Leu Arg  
 290 295 300  
 Leu Ser Gln Asn Glu Met Asp His Val Asn Gln Ser Met His Gly Met  
 305 310 315 320  
 Val Val Gln Gln Gln Leu Ala His His Thr Asn Gly His Ser Ser Gly  
 325 330 335  
 Gly Tyr Met Ser Pro Leu Arg Glu His Arg Ser Glu Lys Asn Asp Asp  
 340 345 350  
 Glu Met Ser Gln Leu Arg Thr Ala Val Gln Arg Leu Met Ala Asp Asn  
 355 360 365  
 Glu His Lys Ser Leu Gln Ile Asn Thr Leu Arg Asn Ala Leu Asp Glu

370	375	380
Gln Met Arg Ser Arg Ser	Gln Gln Glu Asp Phe	Tyr Ala Ser Gln Arg
385	390	395
Asn Tyr Thr Asp Asn Phe Asp Val Asn Ala Gln Ile Arg Arg	Ile Leu	400
405	410	415
Met Asp Glu Pro Ser Asp Ser Met Ser His Ser Thr Ser Phe Pro Val	420	425
	430	430
Ser Leu Ser Ser Thr Thr Ser Asn Gly Lys Gly Pro Arg Ser Thr Val	435	440
	445	445
Gln Ser Ser Ser Tyr Asn Ser Ser Leu Ser Ala Val Ser Pro Gln	450	455
	460	460
His Asn Trp Ser Ser Ala Gly Ala Gly Thr Pro Arg Gln Leu His Pro	465	470
	475	480
Ile Gly Gly Asn Gln Arg Val Asn Asn Ile Thr Ser Ala Gln Tyr Cys	485	490
	495	495
Ser Pro Ser Pro Pro Ala Ala Arg Gln Leu Ala Ala Glu Leu Asp Glu	500	505
	510	510
Leu Arg Arg Asn Gly Asn Glu Gly Ala Asn His Asn Tyr Ser Ser Ala	515	520
	525	525
Ser Leu Pro Arg Gly Val Gly Lys Ala Ser Ser Thr Leu Thr Leu Pro	530	535
	540	540
Ser Lys Lys Leu Ser Val Ala Ser Gly Thr Ser Val Val Glu Ser Asp	545	550
	555	560
Asp Glu Ile Ala Arg Gly Arg Asn Leu Asn Asn Ala Thr Ser Gln Ser	565	570
	575	575
Asn Leu Lys Asn Phe Ser Arg Glu Arg Thr Arg Ser Ser Leu Arg Asn	580	585
	590	590
Ile Phe Ser Lys Leu Thr Arg Ser Thr Ser Gln Asp Gln Ser Asn Ser	595	600
	605	605
Phe Arg Arg Gly Ser Ala Ala Arg Ser Thr Ser Thr Ala Arg Leu Gly	610	615
	620	620
Ser Thr Asn His Leu Gly Thr Val Ser Lys Arg Pro Pro Leu Ser Gln	625	630
	635	640
Phe Val Asp Trp Arg Ser Glu Gln Leu Ala Asp Trp Ile Ala Glu Ile	645	650
	655	655
Gly Tyr Pro Gln Tyr Met Asn Glu Val Ser Arg His Val Arg Ser Gly	660	665
	670	670
Arg His Phe Leu Asn Met Ser Met Asn Glu Tyr Glu Gly Val Leu Asn	675	680
	685	685
Ile Lys Asn Pro Val His Arg Lys Arg Val Ala Ile Leu Leu Arg Arg	690	695
	700	700
Ile Glu Glu Asp Ile Met Glu Pro Ala Asn Lys Trp Asp Val His Gln	705	710
	715	720
Thr Leu Arg Trp Leu Asp Asp Ile Gly Leu Pro Gln Tyr Lys Asp Val	725	730
	735	735
Phe Ala Glu Asn Val Val Asp Gly Pro Leu Leu Leu Ser Leu Thr Ala	740	745
	750	750
Asn Asp Ala Val Glu Met Lys Val Val Asn Ala His His Tyr Ala Thr	755	760
	765	765
Leu Ala Arg Ser Ile Gln Phe Leu Lys Lys Ala Asp Phe Arg Phe Asn	770	775
	780	780
Ala Met Glu Lys Leu Ile Asp Gln Asn Ile Val Glu Lys Tyr Pro Cys	785	790
	795	800
Pro Asp Val Val Val Arg Trp Thr His Ser Ala Thr Cys Glu Trp Leu	805	810
	815	815
Arg Lys Ile Asp Leu Ala Glu Phe Thr Gln Asn Leu Leu Phe Ala Gly	820	825
	830	830
Val Pro Gly Ala Leu Met Ile Tyr Glu Pro Ser Phe Thr Ala Glu Ser	835	840
	845	845
Leu Ala Glu Ile Leu Gln Met Pro Pro His Lys Thr Leu Leu Arg Arg	850	855
	860	860
His Leu Thr Ser His Phe Asn Gln Leu Leu Gly Pro Lys Ile Ile Ala	865	870
	875	880

Asp Lys Arg Asp Phe Leu Ala Ala Gly Asn Tyr Pro Gln Ile Ser Pro  
885 890 895  
Thr Gly Arg Val Lys Val Val Lys Lys Gly Phe Ser Leu Thr Arg Lys  
900 905 910  
Lys Ala Lys Asn Glu Ile Cys Leu Glu Pro Glu Glu Leu Leu Cys Pro  
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Phe Glu Ser Ser Asn Val  
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<210> 72  
<211> 8  
<212> PRT  
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Gly Thr Ser Ser Pro Ser Ala Asp  
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<210> 73  
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<212> PRT  
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<400> 73  
Ala Pro Lys Thr Asn Met Lys His Met Ala  
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<210> 74  
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<212> PRT  
<213> Foot-and-mouth disease virus

<400> 74  
Tyr Thr Thr Ser Thr Arg Gly Asp Leu Ala His Val Thr Thr Thr  
1 5 10 15

<210> 75  
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Cys Val Thr Ile Met Thr Val Asp Asn Pro Ala Ser Thr Thr Asn Lys  
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Asp Lys

<210> 76  
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<210> 77  
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<212> PRT  
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<400> 77  
Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr  
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<210> 78  
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<400> 78  
His Ile Gly Pro Gly Arg Ala Phe Gly Gly Gly  
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<212> PRT  
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<210> 81  
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Asp Ala

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Pro Cys Gly Ile Asp Ala Ala Gln Ser Ala Asp Gln Ser Val Asp Phe  
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Lys Ala Phe Asp Ile Lys Leu Val Asn Cys Asp Ile Thr Asn Tyr Lys  
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Lys Pro Ala Thr Gly  
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<400> 83  
Met Ile Lys Ser Thr Gly Ala Leu Leu Leu Phe Ala Ala Leu Ser Ala  
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20 25 30  
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 Met Arg Leu Arg Phe Ser Val Pro Leu Phe Phe Gly Cys Val Phe  
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 Val His Gly Val Phe Ala Gly Pro Phe Pro Pro Pro Gly Met Ser Leu  
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 Pro Glu Tyr Trp Gly Glu Glu His Val Trp Trp Asp Gly Arg Ala Ala  
 35 40 45  
 Phe His Gly Glu Val Val Arg  
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<210> 86  
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 <212> PRT  
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<400> 86  
 Pro Ala Cys Thr Leu Ala Met Glu Asp Ala Trp Gln Ile Ile Asp  
 1 5 10 15

<210> 87  
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<400> 87  
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 Leu Met Ser Gln His Val His Ala Ala Asp Asn Leu Thr Phe Lys Gly  
 20 25 30  
 Lys Leu Ile Ile  
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<210> 88  
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 20 25 30  
 Val Gly

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25

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<400> 141
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<222> 8, 9, 10, 11
<223> n = residues with no base, essentially glycines that allow the PNA to
fold back on itself to form the triple helix

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<212> DNA
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fold back on itself to form the triple helix

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<213> Escherichia coli  
  
<400> 157  
Asn Lys Gly Gln Gly Glu  
1 5

<210> 158  
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<400> 158  
Ser Gly Phe Asn Ala Asp Tyr Glu Ala Ser Ser Ser Arg Cys  
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<210> 159  
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Pro Ile Asp Met Glu Ser Gln Glu Arg Ile Lys Ala Glu Arg Lys Arg  
1 5 10 15  
Met

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<212> PRT  
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<400> 160  
Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu  
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<210> 161  
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<400> 161  
Glu Glu Tyr Ser Ala Met Arg Asp Gln Tyr Met Arg Thr Gly Glu  
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<210> 162

<211> 11  
<212> PRT  
<213> Human herpes virus type 1

<400> 162  
Gln Pro Glu Leu Ala Pro Glu Asp Pro Glu Asp  
1 5 10

<210> 163  
<211> 11  
<212> PRT  
<213> Enterobacteria phage T7

<400> 163  
Met Ala Ser Met Thr Gly Gly Gln Gln Met Gly  
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<210> 164  
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<210> 165  
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<220>  
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<210> 166  
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Thr Pro His Pro Gln  
1 5

<210> 167  
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<212> PRT  
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<210> 168  
<211> 15  
<212> PRT  
<213> Artificial  
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<223> Derived from S-peptide fragment of ribonuclease A protein, probably from Bos taurus.

<400> 168  
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1 5 10 15

<210> 169  
<211> 5  
<212> PRT  
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<223> Derived from a consensus recognition sequence of cAMP-dependent protein kinase (protein kinase A).

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<210> 170  
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<210> 171  
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1 5 10

<210> 172  
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<212> PRT  
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<223> Identified from M13 bacteriophage peptide display library.

<400> 172  
Ala Gln Asn Pro Ser Asp Asn Asn Thr His Thr His  
1 5 10

<210> 173

<211> 12  
<212> PRT  
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<223> Identified from M13 bacteriophage peptide display library.

<400> 173  
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<210> 174  
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<212> PRT  
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<211> 12  
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<210> 179  
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<210> 180  
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1 5 10